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FOOD SAFETY REGULATIONS APPLIED TO FISH BY MAJOR IMPORTING COUNTRIES

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
ROME, November 1989

Preface

This study was prepared by the Fish Utilization and Marketing Service of the FAO Fisheries Department with assistance from the Torry Research Station, UK. The initiative for the work came from the Sub-Committee on Fish Trade of the FAO Committee on Fisheries, 24-28 October 1988.

FAO.
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ABSTRACT

The publication attempts to tabulate in summary form the food safety regulations applied to fish by the members of the European Community together with Canada, Japan and the USA. These countries are collectively responsible for over ninety percent of the world's fish imports.

The intention is to provide information to producers of fishery products in developing countries on the requirements of importers in order to encourage trade. The use of additives, levels of contaminants, microbiological standards and labelling regulations are covered. Exporters are, however, warned that regulations can change and that they should check with regulatory agencies in importing countries. The addresses of these agencies are given.

The publications is also intended to promote discussion leading to easier harmonization of regulations.

W/T 8373

The FAO Fisheries Circular is a vehicle for distribution of short or ephemeral notes, lists, etc., including provisional versions of documents to be issued later in other series.

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ADDITIVES:

- General
- Antioxidants
- Colours
- Emulsifiers and Stabilisers
- Preservatives
- Flavour Enhancing Agents

HAZARDOUS SUBSTANCES:

- Pesticide Residues
- Contaminants (Organochlorines, Heavy Metals, Other Trace Elements)
- Natural Toxins
- Radionuclides

MICROBIOLOGICAL STANDARDS

LABELLING REGULATIONS

- General
- The Label
  - Location of Mandatory Label information
  - Visual Clarity of Labelling
  - Language
  - Honesty and Clarity
- Contents of the Label
  - Name of the Product
  - List of Ingredients
  - Quantity Declaration
  - Shelf-life Declaration
  - Other Information to be included on the Label

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1. INTRODUCTION

Developing countries are now responsible for more than fifty percent of the fish in international trade but have often complained that they are being disadvantaged by the complexity of health and quality regulations applied by importing countries. In the past it has been suggested that these regulations have been used as non-tariff barriers and there is no doubt that the way in which the regulations are implemented, and the lack of consistent standards, have certainly inhibited trade.

The Fish Utilization and Marketing Service of FAO has collected the regulations of the European Community, Canada, Japan and USA which collectively import over ninety percent of the fish that is traded. These regulations have been summarized in tables covering additives, hazardous substances, microbiological standards and labelling requirements. To the extent possible a standard format has been used but where necessary this has been modified to increase the clarity. At this stage no attempt has been made to include quality criteria, the way in which the regulations are applied or complete certification requirements. The present publication is put out as a Fisheries Circular in order to gauge the response to its usefulness and also to confirm that the information contained is accurate. While information has been sought from the countries included, this may have been distorted by summarization or the regulations may have changed. Exporters must be aware of possible changes and check with the importing country authorities, at the address given, before shipping products.

In the future, depending on the response, FAO would intend to bring out a more comprehensive and permanent document to serve two main purposes. The most urgent need is to provide exporters in developing countries with the information they need to ensure compliance with the regulations of importers. A second important role is to serve as an information document to assist with the various efforts underway to harmonize and simplify health and quality regulations.

Corrections to the material included, suggestions on additional coverage and comments on the usefulness of the publication would be most welcome and should be addressed to: David James, Senior Fishery Industry Officer, FAO.

2. EXPLANATORY NOTES

i) The summary tables attempt to group together the relevant food safety regulations of each country under 4 main headings: additives, hazardous contaminants, microbiological standards and food labelling requirements.

ii) The tables cover those products in which fish is the main component but occasional references to non-fish products (snails, frogs legs) are included because of traditional market associations with fish.

iii) The format of the tables is generally consistent but, where beneficial, a standard layout has given way to clarity.

iv) The first (LHS) column of each table specifies a main product group (eg general - all products, or fish/shellfish species) followed, where relevant, by specific types of product (eg fillets, smoked, preserved etc).

v) The second column lists the substance (additive, contaminant or microorganism) for which regulations relevant to the product group exists. These are usually given in alphabetical order but derivatives or other substances which are similar to each other are often grouped together (eg fatty acids and their esters are grouped together as are phosphates and polyphosphates). For economy of space, some related substances have been collected together and abbreviated by replacing a common prefix or suffix with the symbol ~. Thus calcium ascorbate and sodium ascorbate are sometimes represented as ascorbate, calcium~, sodium~ whilst sodium metaphosphate and sodium polyphosphate may become sodium, ~metaphosphate, ~polyphosphate.

Inclusion of an additive under a particular heading cannot be taken to mean that it is permitted where the reason for its inclusion serves some function different from that indicated in the table heading.

Where polychlorinated biphenyls are identified by IUPAC code numbers, this refers to rules adopted by the Council of the International Union of Pure and Applied Chemistry.

vi) The third column of the additives table gives the corresponding European Community serial number for the additive, where such a number exists. This has been included as a useful alternative reference system which covers most of the food additives in general use and includes all categories of additives in the one coding system. Note; where the serial number has the prefix letter E, this indicates that the additive has been approved by the European Community. For pesticides, this column gives the appropriate Chemical Abstracts Registration (CAS) number to assist identification of these substances.

vii) The last column (RHS) gives any quantitative maximum permitted level for the additive, contaminant or microbial group which is specified in the regulations. This column has two sub-sections giving first the specified limit for the individual substance and, where applicable, any specified limit for combinations of substances and relevant qualifying notes.

The units are usually milligrams(mg) of substance per kilogram(kg) or litre (l) of product (≡ parts per million, ppm). Where other units are relevant they are given within the table. For a single unit to be used (mg/kg) some of the numbers are very large and, for clarity, power functions are used for numbers of 10,000 or higher. Thus a bacterial count of 1 million/g is given as 10^6/g. However with additives, a single power function of 10^3 is used: 10,000 mg/kg becomes 10 x 10^3 mg/kg (= 10 g/kg).

viii) The limits for radionuclide contamination are usually specified in terms of Bequerels (Bq) per kilogram of product. The USA limits are given as picoCuries per kilogram and the limits have been given in both unit systems. 1 Curie = 3.7×10^{10} Bq
= 3.7×10^{10} disintegrations per second
1 picoCurie (1 pCi) = 0.037 Bq.

ix) GMP = Good Manufacturing Practice, a term used in place of a precise, quantitative limit to place an obligation on a manufacturer to use a permitted additive with care and in no greater amount than the minimum necessary to achieve the desired effect.

x) References to certification requirements as distinct from labelling requirements, have also been included within the additives/contaminants tables.

xi) The most detailed labelling regulations (EEC and USA) have been summarised and given as Tables 3a and 3b respectively. The summaries are set out under a series of headings and sub-headings in a sequential arrangement: General, The Label (location, visual clarity, language, veracity), Contents of the Label (name, ingredients, quantity, shelf-life, other information).

For countries which are member states of the EEC, the summary tables of labelling regulations give only brief details of those variations, as allowed within the EEC directive, which the individual countries have adopted.

xii) The tables are attempts to present information, which usually exists in rather complex regulations, in a form suitable for 'ready reference', and should be used as such. They cannot be guaranteed to embody every nuance of such legislation nor always be up to date. Thus, they need to be used as a first indication of likely difficulties, and important detail should be confirmed by direct reference to the relevant government agencies listed in Table 1b.

Table 1 List of Countries Included in the Summaries

Belgium

Canada

Denmark

France

Germany - Federal Democratic Republic (FDR)

Greece

Ireland

Italy

Japan

Luxembourg

Netherlands

Portugal

Spain

United Kingdom (UK)

United States of America (USA)

Table 1(b) List of Countries with Addresses of Relevant Government Agencies

	Government Agencies involved:
Belgium	Health and Product Standards Ministère de la Santé Publique Cité Administrative de l'état 1010 Bruxelles Belgium Telephone: 02-2104843 Labelling and Marking Standards Office National des Débouchés Agricoles et Horticoles 7 rue Gaucheret 1000 Bruxelles Belgium Telephone: 513-8411 Inspection Agency Fisheries Research Station (RVZ) Ankerstraat 1 Oostende B-8400 Telephone: 59-320805/59-320388 Ministère de la Santé Publique et de la Famille Service d'Inspection des Denrées Alimentaires Cite Administrative Bloc C 20 rue Montagne de l'Oratoire Bruxelles B1010
Canada	Inspection and Technology Branch Fisheries and Oceans Canada Station 1102 Ottawa, Ontario K1A 0E6 Food Regulatory Affairs Division Food Directorate Health Protection Branch Health and Welfare Canada Tunney's Pasture Ottawa, Ontario K1A 0L2 Canada Food and Drug Directorate Department of National Health and Welfare Tunney's Pasture Ottawa 3, Ontario Canada
Denmark	Health Standards National Food Agency Morkhoj Bygade 19 DK 2860 Søborg Denmark Telephone: 01-696600 Fax: 01-660100 Telex: 16298 FOODIN DK Inspection Agency Ministry of Fisheries Fish Inspection Agency PO Box 9050 21, Dronnigens Tvaergade DK-1022 Copenhagen K Telephone: 01-929090 Fax: 01-320471 Telex: 19148 FMIND DK

France

Health Standards (Publications)
Direction des services Vebrun Cires
44-46 Boulevard de Dienille
Paris, 15
Telephone: 575-62-25

Direction Générale de l'Alimentation (Ministère de l'agriculture)
Service Vétérinaire d'hygiène alimentaire
Bureau des Produits de la Pêche
175, rue du Chevaleret
75646 Paris CEDEX 13
Telephone: 45-84-13-13

Product, Labelling and Marking Standards
Ministere de l'Agriculture
Direction de la Production, des Marchés et des Exchanges Extérieurs
(Ministry of Agriculture, Office of Production, Marketing and Foreign Trades)
78 rue de Varenne
75007 Paris
Telephone: 555-95-50

Service de la Repression des Fraudes
13 rue Saint Georges
75009 Paris
France

Germany (FDR)

Bundes - Ernahrunsministerium
Bonn 53
Federal Republic of Germany

Greece

The Supreme Chemical Council of State
General State Laboratory
16a Tosha Street
Athens 602
Greece

Ireland (R)

Department of the Marine
Leeson Lane
Dublin 2
Ireland

Italy

Health Product Specifications, Labelling and Marking Standards
Direzione Generale
Igiene Alimenti, Nutrizione
Division 3
Ministero della Sanita
Rome
Italy

Instituto Superiore di Sanita
Viale Regina Elena, 299
00100 - Rome
Italy

Ministero per la Sanita
Palazzo Viminale
Via Aqostino de Pretis
00100 - Rome
Italy

Japan

Food Sanitation Division
Ministry of Health and Welfare
2-2, Kasumigaseki, 1-Chome
Chiyoda-Ku 100
Tokyo
Japan

Luxembourg

Health and Product Specification Standards
Labelling and Marking Standards
Ministère de la Santé
2935 - Luxembourg
Grand-Duché de Luxembourg

Ministère de la Santé
2935 - Luxembourg
Grand-Duché de Luxembourg

Netherlands

Health, Product Specification, Labelling & Marking Standards
Keuringsdienst voor Waren (Food Inspection Service)
Prinsegracht 50
Hague
Netherlands

Ministerie van Welzijn, Volksgezondheid en Cultuur
Doketer Reijersstraat 12
Leidschendam
Netherlands

Governmental Quality Service of Fish and Fishery Products of the Ministry of Agriculture and Fisheries
2e Zeesluisdwarsweg 6
Scheveningen
Zuid-Holland

Bezuidenhoutseweg 73
PO Box 20401
2500 EK Den Haag

Commodity Board for Fish and Fishery Products (VVP)
2b Javastraat
PO Box 80511
Den Haag 2508 GM
Zuid-Holland

National Inspection Service for Meat, Livestock and Animal Products
Muzenstraat 30
PO Box 307 24
2500 GS
The Hague

Ministerie voor Landbouw en Visse
Bezuidenhoutseweg 73
2594 AC The Hague
The Netherlands

Portugal

Instituto Portugues de Conservas o Pescado (IPCP)
Pavilhao Nascente do Terrapleno da Junqueira
Avenida Brasilia
1300 Lisboa

Instituto Nacional de Investigacao das Pescas (INIP)
Edificio INIP
Avenida Brasilia
1400 Lisboa

Ministerio de Agricultura, Pescas e Alimentacao
Instituto de Qualidade Alimentar
R Alexandre Herculano 6-4o
1100 Lisboa

Spain

Product Standards
Servicio Oficial de Inspección, Vigilancia y Regulaciones del Comercio Exterior
Dirección General de Comercio Exterior
Ministerio de Economia y Hacianda
Paseo de la Castellana 162-6
Madrid 28046
Telephone: 259-2709/9695

	Servico de Sanidad Exterior Dirección General de Salud Alimentaria y Protección de los Consumidores Ministerio de Sanidad y Consumo Paseo del Prado 18-20 Madrid 28014
United Kingdom	Ministry of Agriculture, Fisheries and Foods Food Standards Safety Division Food Safety Directorate Ergon House 17 Smith Square London SW1P 3HX Telephone: 01-238-3000
United States of America (USA)	Food and Drug Administration Department of Health and Human Services 200 C St SW Washington DC 20204 Office of Utilisation Research F/53 National Marine Fisheries Service 1825 Connecticut Avenue NW Washington DC 20235 Telephone: (202) 673 5371

TABLE 2 Food Additives in Numerical Order According to the European Community E-number System

(E - indicates that the substance has been approved for use by the EEC)

E100	Curcumin
E101	Riboflavin (lactoflavin; vitamin B_2)
101(a)	Riboflavin-5'-phosphate
E102	Tartrazine
E104	Quinoline yellow
107	Yellow 2G
E110	Sunset yellow FCF
E120	Cochineal (carmine of cochineal; carminic acid)
E122	Carmoisine
E123	Amaranth
E124	Ponceau 4R
E127	Erythrosine
128	Red 2G
E131	Patent blue V
E132	Indigo carmine (indigotine)
133	Brilliant blue FCF
E140	Chlorophyll
E141	Copper complexes of chlorophyll and chlorophyllins
E142	Green S (acid brilliant green)
E150	Caramel
E151	Black PN
E153	Carbon black (vegetable carbon)
154	Brown FK (kipper brown)
155	Brown HT (chocolate brown HT)
E160(a)	Alpha-carotene; beta-carotene; gamma-carotene
E160(b)	Annatto; bixin; norbixin
E160(c)	Capsanthin; capsorubin; (paprika extract)
E160(d)	Lycopene
E160(e)	beta-apo-8'-carotenal
E160(f)	Ethyl esters of beta-apo-8'-carotenoic acid
E161	Xanthophylls
E161(a)	Flavoxanthin
E161(b)	Lutein
E161(c)	Cryptoxanthin
E161(d)	Rubixanthin
E161(e)	Violaxanthin
E161(f)	Rhodoxanthin
E161(g)	Canthaxanthin
E162	Beetroot red (betanin; betanidin)
E163	Anthocyanins
E170	Calcium carbonate
E171	Titanium dioxide
E172	Iron oxides; iron hydroxides
E173	Aluminium
E174	Silver
E175	Gold
E180	Pigment rubine (lithol rubine BK)

E200	Sorbic acid
E201	Sodium sorbate
E202	Potassium sorbate
E203	Calcium sorbate
E210	Benzoic acid
E211	Sodium benzoate
E212	Potassium benzoate
E213	Calcium benzoate
E214	Ethyl 4-hydroxybenzoate (ethyl para-hydroxybenzoate)
E215	Ethyl 4-hydroxybenzoate, sodium salt (sodium ethyl para-hydroxybenzoate)
E216	Propyl 4-hydroxybenzoate (propyl para-hydroxybenzoate)
E217	Propyl 4-hydroxybenzoate, sodium salt (sodium propyl para-hydroxybenzoate)
E218	Methyl 4-hydroxybenzoate (methyl para-hydroxybenzoate)
E219	Methyl 4-hydroxybenzoate, sodium salt (sodium methyl para-hydroxybenzoate)
E220	Sulphur dioxide
E221	Sodium sulphite
E222	Sodium hydrogen sulphite (sodium bisulphite; acid sodium sulphite)
E223	Sodium metabisulphite (disodium pyrosulphite)
E224	Potassium metabisulphite (potassium pyrosulphite)
E226	Calcium sulphite
E227	Calcium hydrogen sulphite (calcium bisulphite)
E230	Biphenyl (diphenyl)

E231	2-hydroxybiphenyl (orthophenylphenol)
E232	Sodium biphenyl-2-yl oxide (sodium orthophenylphenate)
E233	2-(thiazol-4-yl)benzimidazole (thiabendazole)
234	Nisin
E236	Formic acid (methanoic acid)
E237	Sodium formate
E238	Calcium formate
E239	Hexamine (hexamethylenetetramine)
E249	Potassium nitrite
E250	Sodium nitrite
E251	Sodium nitrate
E252	Potassium nitrate
E260	Acetic acid
E261	Potassium acetate
E262	Sodium hydrogen diacetate; sodium acetate
E263	Calcium acetate
E270	Lactic acid
E280	Propionic acid
E281	Sodium propionate
E282	Calcium propionate
E283	Potassium propionate
E290	Carbon dioxide
296	DL-malic acid; L-malic acid
297	Fumaric acid

E300	L-Ascorbic acid (vitamin C)
E301	Sodium L-ascorbate (vitamin C)
E302	Calcium L-ascorbate
E304	6-O-palmitoyl-L-ascorbic acid (ascorbyl palmitate)
E306	Extracts of natural origin rich in tocopherols (vitamin E)
E307	Synthetic alpha-tocopherol (vitamin E)
E308	Synthetic gamma-tocopherol (vitamin E)
E309	Synthetic delta-tocopherol (vitamin E)
E310	Propyl gallate
E311	Octyl gallate
E312	Dodecyl gallate
E320	Butylated hydroxyanisole (BHA)
E321	Butylated hydroxytoluene (BHT)
E322	Lecithins
E325	Sodium lactate
E326	Potassium lactate
E327	Calcium lactate
E330	Citric acid
E331	Sodium citrates
E331(a)	Sodium dihydrogen citrate (monosodium citrate)
E331(b)	Disodium citrate
E331(c)	Trisodium citrate
E332	Potassium dihydrogen citrate (monopotassium citrate); tripotassium citrate
E333	Monocalcium citrate; dicalcium citrate; tricalcium citrate
E334	L-(+)-tartaric acid
E335	Monosodium L-(+)-tartrate; disodium L-(+)-tartrate
E336	Monopotassium L-(+)-tartrate (cream of tartar); dipotassium L-(+)-tartrate
E337	Potassium sodium L-(+)-tartrate; potassium and sodium tartrate
E338	Orthophosphoric acid (phosphoric acid)
E339	Sodium dihydrogen orthophosphate; disodium hydrogen orthophosphate; trisodium orthophosphate
E340	Potassium dihydrogen orthophosphate; dipotassium hydrogen orthophosphate; tripotassium orthophosphate
E341	Calcium tetrahydrogen diorthophosphate; calcium hydrogen orthophosphate; tricalcium diorthophosphate
350	Sodium malate; sodium hydrogen malate
351	Potassium malate
352	Calcium malate; calcium hydrogen malate
353	Metatartaric acid
355	Adipic acid
363	Succinic acid
370	1,4-heptonolactone
375	Nicotinic acid
380	Triammonium citrate
381	Ammonium ferric citrate
385	Calcium disodium ethylenediamine-NNN'N'-tetra-acetate (calcium disodium EDTA)

E400	Alginic acid
E401	Sodium alginate
E402	Potassium alginate
E403	Ammonium alginate

E404	Calcium alginate (algin)
E405	Propane-1,2-diol alginate (propylene glycol alginate)
E406	Agar (agar-agar; Japanese isinglass)
E407	Carrageenan
E410	Locust bean gum (carob gum)
E412	Guar gum
E413	Tragacanth
E414	Gum arabic (acacia)
E415	Xanthan gum
416	Karaya gum (sterculia gum; Indian tragacanth)
E420	Sorbitol; sorbitol syrup
E421	Mannitol
E422	Glycerol (glycerin)
430	Polyoxyethylene (8) stearate
431	Polyoxyethylene (40) stearate
432	Polyoxyethylene (20) sorbitan monolaurate (Polysorbate 20; Tween 20)
433	Polyoxyethylene (20) sorbitan mono-oleate (Polysorbate 80; Tween 80)
434	Polyoxyethylene (20) sorbitan monopalmitate (Polysorbate 40; Tween 40)
435	Polyoxyethylene (20) sorbitan monostearate (Polysorbate 60; Tween 60)
436	Polyoxyethylene (20) sorbitan tristearate (Polysorbate 65; Tween 65)
E440(a)	Pectin
E440(b)	Amidated pectin Pectin extract
442	Ammonium phosphatides
E450(a)	Disodium dihydrogen diphosphate (disodium pyrophosphate; disodium dihydrogen pyrophosphate; acid sodium pyrophosphate); trisodium diphosphate; tetrasodium diphosphate (tetrasodium pyrophosphate); tetrapotassium diphosphate (tetrapotassium pyrophosphate)
E450(b)	Pentasodium triphosphate (sodium tripolyphosphate); pentapotassium triphosphate (potassium tripolyphosphate)
E450(c)	Sodium polyphosphates, potassium polyphosphates
E460	Microcrystalline cellulose; alpha-cellulose (powdered cellulose)
E461	Methylcellulose
E463	Hydroxypropylcellulose
E464	Hydroxypropylmethylcellulose
E465	Ethylmethylcellulose (methylethylcellulose)
E466	Carboxymethylcellulose, sodium salt (CMC)
E470	Sodium, potassium and calcium salts of fatty acids (soaps)
E471	Mono- and di-glycerides of fatty acids (glyceryl monostearate; glyceryl distearate)
E472(a)	Acetic acid esters of mono- and di-glycerides of fatty acids (acetoglycerides)
E472(b)	Lactic acid esters of mono- and di-glycerides of fatty acids (lactoglycerides)
E472(c)	Citric acid esters of mono- and di-glycerides of fatty acids (citroglycerides)
E472(d)	Tartaric esters of mono- and di-glycerides of fatty acids
E472(e)	Mono- and diacetyltartaric acid esters of mono- and di-glycerides of fatty acids
E473	Sucrose esters of fatty acids
E474	Sucroglycerides
E475	Polyglycerol esters of fatty acids
476	Polyglycerol esters of polycondensed fatty acids of castor oil (polyglycerol polyricinoleate)
E477	Propane-1,2-diol esters of fatty acids (propylene glycol esters of fatty acids)
478	Lactylated fatty acid esters of glycerol and propane-1,2-diol
E481	Sodium stearoyl-2-lactylate
E482	Calcium stearoyl-2-lactylate
E483	Stearyl tartrate
491	Sorbitan monostearate
492	Sorbitan tristearate (Span 65)
493	Sorbitan monolaurate (Span 20)
494	Sorbitan mono-oleate (Span 80)
495	Sorbitan monopalmitate (Span 40)

500	Sodium carbonate; sodium hydrogen carbonate (bicarbonate of soda); sodium sesquicarbonate
501	Potassium carbonate; potassium hydrogen carbonate
503	Ammonium carbonate; ammonium hydrogen carbonate (ammonium bicarbonate)
504	Magnesium carbonate
507	Hydrochloric acid
508	Potassium chloride
509	Calcium chloride
510	Ammonium chloride
513	Sulphuric acid
514	Sodium sulphate
515	Potassium sulphate
516	Calcium sulphate
518	Magnesium sulphate
524	Sodium hydroxide
525	Potassium hydroxide
526	Calcium hydroxide
527	Ammonium hydroxide
528	Magnesium hydroxide

529	Calcium oxide
530	Magnesium oxide
535	Sodium ferrocyanide
536	Potassium ferrocyanide
540	Dicalcium diphosphate (dicalcium pyrophosphate)
541	Sodium aluminium phosphate
542	Edible bone phosphate
544	Calcium polyphosphates
545	Ammonium polyphosphates
551	Silicon dioxide (silica)
552	Calcium silicate
553(a)	Magnesium silicate synthetic; magnesium trisilicate
553(b)	Talc (magnesium hydrogen metasilicate)
554	Aluminium sodium silicate (sodium aluminosilicate)
556	Aluminium calcium silicate
558	Bentonite
559	Kaolin (aluminium silicate)
570	Stearic acid
572	Magnesium stearate
575	D-glucono-1,5-lactone (glucono delta-lactone)
576	Sodium gluconate
577	Potassium gluconate
578	Calcium gluconate

620	L-glutamic acid
621	Sodium hydrogen L-glutamate (monosodium glutamate; MSG)
622	Potassium hydrogen L-glutamate (monopotassium glutamate)
623	Calcium dihydrogen di-L-glutamate (calcium glutamate)
627	Guanosine 5'-disodium phosphate (sodium guanylate)
631	Inosine 5'-disodium phosphate (sodium inosinate)
635	Sodium 5'-ribonucleotide
636	Maltol
637	Ethyl maltol

900	Dimethylpolysiloxane
901	Beeswax
903	Carnauba wax
904	Shellac
905	Mineral hydrocarbons
907	Refined microcrystalline wax
920	L-cysteine hydrochloride
924	Potassium bromate
925	Chlorine
926	Chlorine dioxide (chlorine peroxide)
927	Azodicarbonamide

BELGIUM

PERMITTED ADDITIVES

General: There is a permitted list of food additives. Any additive not on the list may not be used unless special permission is granted. Application for use of new additives, giving technical details proving that the use of such an additive is necessary, should be made in writing to: Ministere de la Santé Publique et de la Famille, Service d'Inspection des Denrées Alimentaires, Cite Administrative Bloc C, 20 rue Montagne de l'Oratoire, Bruxelles B1010.

Note: The simultaneous application of additives may be used in quantities such that the sum of their respective amounts in the food, expressed in a percentage of the maximum amount authorized for each of them, does not exceed 100%.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit	
			Individual (mg/kg)	Combined (mg/kg)
Antioxidants				
Fish, Shrimp croquettes	Ascorbic acid	E300	500	
	Ascorbate, calcium-, potassium-, sodium-	E302,-,E301	500	
	BHA (Butylated hydroxyanisole)	E320	100	
	BHT (Butylayed hydroxytoluene)	E321	100	
Colours				
Herring, Coalfish smoked	Erythrosine	E127	100	200
	Sunset yellow FCF	E100		
	Tartzarine	E102		
Shrimps - preserved	α-,β-,γ-carotene	E160(a)	30	50
	Canthaxanthin	E161(g)		
	Erythrosine	E127		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
Caviar and other fish roe	Amaranth	E123	100	600
	Brilliant black PN	E151		
	Cochineal - red A	E120		
	Erythrosine	E127		
	Indigotin	E132		
	Sunset yellow FCF	E110		
	Tartrazine	E102		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Emulsifiers and Stabilisers				
General –	Fatty acid mono- and diglycerides esterified in total or in part with the following permitted acids: acetic, lactic, citric, tartaric, mono-acetyl tartaric and diacetyltartaric, or a mixture of acetic and tartaric acids.	E472(a),(b),(c),(e)	No limit specified	
	Gelatin			
Fish and shellfish – Jellied, canned or semi-preserved	Carboxymethylcellulose	E466	10×10^3	
	Vegetable gums	E410,E412,etc	30×10^3	
Fish, Shrimp – croquettes	Cellulose, methyl~, carboxymethyl~(CMC), hydroxypropylmethyl~	E461,E466,E464	1500	
	Lecithin, mono- and diglycerides and esters of~	E322	3000	
	Phosphates, ortho~, di~, tri~ (calculated on the fat-free dry matter)	E339,E340,E341, E450	22×10^3	
	Vegetable gums	E410,E412,etc	1500	
Preservatives				
Caviar and similar products	Benzoic acid	E210	1000	
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211		
	p-Hydroxybenzoic acid, methyl, ethyl and propyl esters of~	E218,E214,E216		
Fish and shellfish (except shrimp) – semi-preserves	Benzoic acid	E210	1000	
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211		
	p-Hydroxybenzoic acid, methyl, ethyl and propyl esters of	E218,E214,E216		
	Sorbic acid	E200	3000	
	Sorbate, calcium~, potassium~, sodium~	E203,E202,E201	3000	
Shrimps – cooked, peeled or not, frozen or not, preserved (canned) semi-preserved	Benzoic acid	E210	8000	
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211		
	Sorbic acid	E200		
	Sorbate, calcium~, potassium~, sodium~	E203,E202,E201		
Fish, Shrimp – croquettes	Benzoic acid	E210	1500	
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211	500	
	Sorbic acid	E200	1500	
	Sorbate, calcium~, potassium~, sodium~	E203,E202,E201	500	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Flavour Enhancing Agents				
General:	Glutamic acid	620	5000	
	Guanilic acid	–	500	
	Inosinic acid	–	500	
Fish, Shrimp croquettes	Ethylmaltol	637	40	
	Glutamic acid	620	10×10^3	

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
General:	No limits established			
Contaminants				
General:	No limits established			
i) Organochlorine				
ii) Heavy metals	Regulations for heavy metal contamination in preparation.			
iii) Other trace elements				
Natural Toxins				
Clams, Mussels, Oysters: Fresh, frozen or canned	PSP (Paralytic shellfish toxin)		0.8	

Fish Product	Hazardous Substance	Specified Limit	
		Individual (mg/kg)	Combined (mg/kg)
Radionuclides			
General:	Cs 134 (Caesium 134) Cs 137 (Caesium 137)	600 Bq/kg (Bq/L) 600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit
		Number of viable organisms per gram of product
General	No microbiological limits established	

LABELLING

General: As per EEC directive (see table 3a)

Additional requirements: All declarations must be in the language of the region in which the products are to be sold.

Shrimp - Imports allowed only from exporters registered with Benelux Health Authorities.

Each shipment must be accompanied by a health certificate issued by respective national agency.

The Certificate must be in accordance with the Codex Alimentarius Recommended International Code of Practice for Shrimps or Prawns, and of the Recommended International Code of Practice on the General Principles of Food Hygiene.

CANADA

PERMITTED ADDITIVES

General: There is a list of permitted food additives. Most marine products are standardised, others are non-standardised. Further information is available from: Food and Drug Directorate, Department of National Health and Welfare, Tunney's Pasture, Ottawa 3, Ontario, Canada.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
General: Non-standardised products	Ascorbic acid	E300	GMP	
	Erythorbic acid	–	GMP	
Fish – preserved, frozen, minced	Ascorbic acid	E300	GMP	
Glaze – for frozen fish	Ascorbate, calcium~, sodium~	E302,E301	GMP	
Tuna – canned	Ascorbic acid	E300	GMP	
Colours				
General: i) Non-standardised	Synthetic colours are subject to certification, by the Director, Health Protection Branch of the Department of Health and Welfare, or other approved agency. Those which are permitted are:			
	Allura red	129	300	300
	Amaranth	E123		
	Erythrosine	E127		
	Indigotine	E132		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Brilliant blue FCF	133	100	100
	Fast green FCF			
ii)	Natural colours (not subject to certification)			
	Alkannet	–	GMP	
	Annatto	E160(b)		
	Anthocyanins	E163		
	Beetroot red	E162		
	Canthaxanthin	E160(g)		
	Caramel	E150		
	Carbon black	E153		
	Carmine	–		
	β-carotene	E160(a)		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	β-apo-8'-carotenal and ethyl ester of~	E160(e)	35	
	Curcumin	E100	GMP	
	Lactoflavin	E101		
	Orchil	–		
	Xanthophylls	E161		
Fish – marinated, cold processed, packaged	Saunderswood (sanderswood or sandalwood) no other colours are permitted		GMP	
Fish – roe Fish – smoked Fish and meat blends Lobster paste Non-standardised foods	May be coloured		No limit specified	
<u>Emulsifiers and Stabilisers</u>				
General: Non-standardised	Acetylated monoglycerides	E472(a)	GMP	
	Acetylated tartaric acid esters of mono- and diglycerides	E472(e)		
	Agar	E406		
	Algin	Various		
	Alginates, ammonium~, calcium~, potassium~, sodium~	E401–404		
	Alginic acid	E400		
	Baker's yeast glycan (polysaccharides)	–		
	Calcium phosphate, dibasic~, tribasic~	E341		
	Calcium, ~carbonate, ~citrate, ~glucinate, ~sulphate, ~tartrate	Various		
	Carboxymethylcellulose	–		
	Carboxymethylcellulose sodium~	E466		
	Carrageenan (Irish moss gelose)	E407		
	Carrageenates, ammonium~, calcium~, potassium~, sodium~	–		
	Fatty acids, lactylic esters of~, polyglycerol esters of~	–,E475		
	Furcelleran, and ammonium, calcium, potassium and sodium salts	– –		
	Gelatin	–		
	Gum arabic	E414		
	Gums – carob bean, cellulose, guar, karaya,	E410,E412,E416		
	– oat, tragacanth, xanthan	–,E413,E415		
	Hydroxypropylcellulose	E463		
	Hydroxypropylmethylcellulose	E464		
	Lactylated mono- and diglycerides	E472(b)		
	Lecithin, hydroxylated lecithin	E322		
	Methylcellulose	E461		
	Methylethylcellulose	E465		
	Mono- and diglycerides	E471		
	Pectin	E440(a)		
	Phosphorylated glycerides, ammonium salt of	–		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
-	Potassium chloride	508	GMP	
	Propylene glycol alginate	E405		
	Propylene glycol mono fatty acid ester	–		
	Sodium cellulose glycolate	–		
	Sodium hexametaphosphate	E450(c)		
	Sodium phosphate, mono-, di- and tribasic~	E339(a,b,c)		
	Sodium potassium tartrate	E337		
	Tetrabasic sodium pyrophosphate	E450(a)		
Fish and meat blends	Diphosphate, sodium~	E450(a)	1000	1000
	Hexametaphosphate, sodium~	E450(c)		
	Tripolyphosphate, sodium~	E450(b)		
Fish fillets, Lobster, Crab, Shrimp, Clam – frozen	Hexametaphosphate, sodium~	E450(c)	5000	5000
	Tripolyphosphate, sodium~	E450(b)		
	Hexametaphosphate, sodium~ – mixed	–		
	Carbonate, sodium~ – mixed		Sodium carbonate must not exceed 15% of the phosphate/carbonate mixture	
	Sodium, ~acid pyrophosphate, ~pyrophosphate tetrabasic, ~tripolyphosphate in combination	E450(a),E450(a) E450(b)		5000
Fish pastes	Mono and diglycerides	E471	GMP	
Fish – prepared	Agar	E406	GMP	
	Carrageenan	E407		
	Gelatin	–		
Lumpfish caviar	Tragacanth	E413	10×10^4	
Glaze – for frozen fish	Acetylated monoglycerides	E472(a)	GMP	
	Sodium, ~alginate, ~carboxymethylcellulose, ~phosphate (dibasic)	E401,E466,E450		
	Calcium chloride			
	Corn syrup			
	Dextrose			
	Glucose and glucose solids			
Preservatives				
Fish – dried, smoked, salted, paste	Sorbic acid	E200	1000	
	Sorbate, calcium~, potassium~, sodium~	E203,E202,E201		
Fish – cold processed (marinated)	Benzoic acid	E210	1000 Note: benzoic acid and p-hydroxy benzoates may NOT be used together in the same food	
	Benzoate, potassium~, sodium~	E212,E211		
	Methyl-p-hydroxybenzoate, sodium~	E219		
	Propyl-p-hydroxybenzoate, sodium~	E217		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Flavour Enhancing Agents				
Prepared fish and fish meat	Liquid smoke	-	No limit specified	
Standardised fish products	Sodium, ~5'-inosinate, ~5'-guanylate, ~glutamate	631,627,621	GMP	

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
General:	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane	50-29-3	5.0	
	DDD (TDE) 2,2-Bis(4-chlorophenyl)-1,1-dichloroethane	72-54-8		
	DDE 2,2,-Bis(4-chlorophenyl)-1,1-dichloroethylene	72-55-9		
	Any other agricultural chemical or derivates		0.1	
Cod - dried	Piperonyl butoxide	51-03-6	1.0	
Contaminants				
i) Organochlorine				
Fish products	PCBs (Polychlorinated biphenyls)		2.0	
	2,3,7,8-tetrachlorodibenzoparadioxin		20 ppt (parts per trillion/ 10-12)	
	All other dioxins		Nil	
ii) Heavy metals				
Fish products (excepting swordfish)	Total mercury		0.5	
Swordfish	No limit established (but consumers are advised on maximum consumption rates of no more than one serving per week)			
Fish protein concentrate	Lead		0.5	

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
iii) Other trace elements			
Fish protein concentrate	Arsenic	3.5	
	Fluoride	150	
Natural Toxin			
General:	Histamine	100 (average for samples) and 300 for any one sample unit	
Clams, Mussels, Oysters } Fresh, frozen, canned forms	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
General:	I 131 (Iodine 131)	70 Bq/kg (Bq/L)	
	I 137 (Iodine 137)	300 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
General:	No microbiological limits established	

LABELLING

Location of the Label – on the main body or face of the container.

Visual Clarity – the fish name must be shown in letters of equal height and prominence; the net contents must be indicated in print size which is dependent on the size of the principal display panel and must be at least 3.2 mm high; descriptive terms must be printed in letters which are at least half the height of those used for the name.

Language – any language may be used but English or French must also be used.

Honesty and Clarity – Markings must not be in a manner which is false, misleading or deceptive. There must not be a quality designation unless a standard has been specified in regulations and the product meets that standard.

Contents of the Label – the common or generic name must be given in the main panel and must state whether: prepared by mincing, flaking or other special process; made from any selected parts of fish; intended for dietatic use.

– the list of ingredients must be given in descending order of their proportions or the actual proportions must be stated.
Natural and artificial colours must be declared by the term 'colour'.
Preservatives must be declared by name
The use of liquid smoke must be declared

– Quantity – must be declared on the main panel. Net weight must be declared except for –
  unfrozen oyster and clam meats: give net contents by fluid measure or count
  oysters in shell: container must show contents in bushels or pecks or by count where container states that contents are to be weighed at the time of retail sale
  canned shellfish: drained weight of the contents

– Shelf-life – there are no regulations requiring an indication of shelf-life to be included on the label.

Other Information – other specific information is required for certain products:
  pickled fish – grade, class and size
  bonless or semi-boneless salted fish – grade
  other salted fish – grade, class, size or count, and moisture content
  bloaters – grade and count
  bloater fillets – grade
  frozen Atlantic smelts – size
  Atlantic oysters in shell – shape designation
  dried squid – grade

– outer cartons need not be fully labelled provided that individual retail packs are correctly labelled but the name of the packer and the date of processing legibly marked on one end of every carton.

– every can must be embossed with a code which identifies the establishment, the date of processing and the contents. A copy of the code key must be provided to the authorities every year before processing commences. Regulations prescribed the first letters of the code marking.

– there are prescribed dimensions and minimum net contents for cans of some fish species.

DENMARK

PERMITTED ADDITIVES

General: There is a positive list of food additives permitted for use in all foods including fish and fishery products. This list is divided categories (a) according to food, and (b) according to use. Permission may be sought to use an additive appearing in part (b) if it is not already mentioned in part (a) from: National Food Agency, Morkhoj Bygade 19, DK – 2860 Soborg, Denmark.

Note: carry-over of additives from ingredients etc, is accepted providing there is no intention of supplementing the additives effect. As a general rule 5% of any maximum limit for that additive is the acceptable carry-over. Where both an acid and its salts are permitted, the maximum refers to the acid.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit	
			Individual (mg/kg)	Combined (mg/kg)
Antioxidants				
General:	Only the following antioxidants are permitted:			
Fish – whole and fillets	Ascorbic acid and ascorbates	E300–E304	200	200
Fish, Fish products – frozen	Ascorbic acid and ascorbates	E300–E304	200	200
Fish – semi-preserved, chemically semi-preserved, smoked, boiled, roasted; Fish, Fish products – fully preserved	BHA (Butylated hydroxyanisole) (only as carry-over from use of fats and oils)	E320	5	
	Citric acid and citrates	E330, –	5	5
	Lactic acid and lactates	E270, –	5	5
Fish, Fish products – dried	BHA	E320	5	
Colours				
General Notes:	Only the colours listed below are permitted: Where reference is made to turmeric the colour level permitted applies to the curcumin colour principle, for annatto extract the bixin colour principle and for red beet colour the betanin colour principle.			
Semi-preserves, Caviar, Caviar substitute	Annatto extract	E160(b)	10	
	Black PN	E151	200	
	Indigo carmine	E132	200	300
	Patent blue V	E131	50	
	Ponceau 4R	E124	20	
	Red beet colour	E162	50	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Sunset yellow FCF	E110	200	
	Tartrazine	E102	200	
	Turmeric	(E100)	10	300
	Caramel	E150(a)		
	Carmoisine	E122	75	
	β-carotene	E160(a)	50	
	Ammonium sulphite processed caramel	E150		
	Total ammoniated caramel	E150(a)+E150(c)		4000
	Vegetable carbon	E153		
Semi-preserves Salmon substitute	Annatto	E160(b)	10	
	β-carotene	E160(a)	50	
	Indigo carmine	E132	200	
	Patent blue V	E131	50	
	Ponceau 4R	E124	20	300
	Red beet colour	E162	50	
	Sunset yellow	E110	200	
	Tartrazine	E102	200	
	Turmeric	(E100)	10	
Shellfish and shellfish products – Frozen, fully preserved, chemically semi-preserved, boiled, roasted	Ponceau 4R	E124		
	Sunset yellow FCF	E110		30
	Tartrazine	E102		
<u>Emulsifiers and Stabilisers</u>				
General:	Only the substances listed below may be used:			
Fish products – frozen	Agar	E406		
	Alginate, ammonium~, calcium~, potassium~, sodium~	E401 to E405	5000	
	Alginic acid	E400		
	Carob gum	E410	20 x 10³	
	Carragenan	E407		
	Cellulose, hydroxypropyl methyl~, methyl~, methylethyl~, sodium carboxymethyl~	E464,E461 E465,E466	5000	
	Guar gum	E412	GMP	
	Gum arabic	E414	GMP	
	Lecithin	E322		
	Microcrystalline cellulose	E460(i)		
	Modified starches (alkali treated, bleached, oxidised, acetylated distarch etc)	–	GMP	
	Mono- and diglycerides	E471		
	Fatty acids, mono- and diglycerides; acetic, citric lactic acid and mono- and diacetyl tartaric acid esters of~	E472(a),E472(c) E472(b),E472(d)	GMP	
	Pectin, amidated pectin	E440(a),E440(b)	GMP	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish { whole / fillets } frozen	as for fish products – frozen		as above	
	Phosphates, mono-, di- and tricalcium o-phosphate	E341(a,b,c)	5000	
	mono-, di- and tripotassium o-phosphate	E340(a,b,c)		
	mono-, di- and trisodium o-phosphate	E339(a,b,c)		
	tetrapotassium diphosphate	E450(a)		
	disodium pyrophosphate	E450(a)		
	tetrasodium pyrophosphate	E450(a)		
	sodium triphosphate	E450(b)		
	sodium polyphosphate	E450(b)		
Fish products – boiled and roasted Fish – fully preserved	as for whole fish and fillets – frozen		Only as a result of carry-over from use of frozen fish and fish cream	
Fish – chemically semi-preserved, preserved	as for whole fish and fillets – frozen		Only as a result of carry-over from use of frozen fish	
Fish – semi-preserves	as for whole fish and fillets – frozen		Only as a result of carry-over from use of frozen fish	
	Tragacanth	E413	2000 but only as a result carry-over from the use of mayonnaise	
	Xanthan gum	E415		
Frozen fish cream	Pentasodium triphosphate	E450(b)	5000	
Cod roe	Xanthan gum	E415	1000	
Preservatives				
General:	Only the substances listed below are permitted:			
Fish and Fish products { chemically semi-preserved	Benzoic acid	E210	1000	
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211		
	p-Hydroxybenzoate, ethyl~, methyl~, propyl~ and sodium salts	E215,E219,E217	300	
	Sorbic acid	E200	1000	
	Sorbate, calcium~, potassium~, sodium~	E203.E202,E201		
Fish and and Fish products { salted, pickled or marinated	Benzoic acid	E210	1000	
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211		
	p-Hydroxybenzoate, ethyl~, methyl~, propyl~ and sodium salts	E215,E219,E217	300	
	Sorbic acid	E200	1000	
	Sorbate, calcium~, potassium~, sodium~	E203,E202,E201		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Herring, Brisling, Sardine } pickled, sweet cured	Nitrate, potassium~, sodium~	E252,E251	500	
Fish - semi-preserved	Benzoic acid	E210	1000	
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211		
	p-Hydroxybenzoate, ethyl~, methyl~, propyl~ and sodium salts	E215,E219,E212	300	
	Nitrate, potassium~, sodium~	E252,E251	Only carry-over arising from use of above product	
	Sorbic acid	E200	1000	
	Sorbate, calcium~, potassium~, sodium~	E203,E202,E201		
Fish and fish products - smoked	Sorbic acid	E200	1000	
	Sorbates, calcium~, potassium~, sodium~	E203,E202,E201		
Flavour Enhancing Agents				
Fish, Fish products } frozen, boiled, roasted, semi-preserved, fully preserved	Glutamic acid	E620	2000	
	Glutamate, sodium~	E621		
	Sodium, ~inosinate, ~guanylate	E631,627	50	

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
Fish and fish products	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane	50-29-3	2.0	
Fish liver	DDT	50-29-3	5.0	
Contaminants				
i) Organochlorine	None specified		No limits established	

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
ii) Heavy metals			
General:	Products have Action Limits which require a Food Inspection Unit to report findings to the National Food Agency, and/or Rejection Limits above which the products must not be sold or imported for sale to the final consumer.		

Fish Product	Hazardous Substance	Action Limit mg/kg	Rejection Limit mg/kg
Fish liver	Cadmium		0.5
Fish – canned, with tomato sauce or concentrated tomato products	Lead		2.0
Shellfish (molluscs and crustaceans) – canned	Lead		2.0
Fish (all others) – canned	Lead		1.0
Shellfish products (molluscs and crustaceans)	Cadmium	0.5	
	Mercury	0.3	
	Lead	1.0	
Porbeagle	Mercury	1.0	
Flounder, Tuna, Bonito, Cod	Mercury		0.5
Eel, Halibut, Freshwater fish	Mercury		1.0
Fish, Fish products not listed above	Cadmium	0.05	
	Mercury		
	Lead	0.3	
iii) Other trace elements	No limits established		
Natural Toxins			
Clams, Mussels, Oysters – Fresh, frozen, canned	Histamine	300	
	PSP (Paralytic shellfish toxin)	0.04	0.08

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Radionuclides			
	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
General:	Few microbiological limits established	
	Salmonella spp	Absent unless use restricted to products of otherwise good quality to eliminate the health hazard
Oysters – 'rinsing' water	Must have a microbiological quality equal to, or better than, that of drinking water.	
	that of drinking water.	

Labelling

General: As per EEC directive (see table 3a).

Additional requirements: Language – should be in Danish
– other languages may be used provided their spelling is not materially different from Danish
– additives need to be declared on all packages (ie no derogation for small packages)

FRANCE

PERMITTED ADDITIVES

General: Other than a list of food colours and antioxidants, there is no list of permitted food additives. An additive may only be used if it is specifically mentioned in the regulation for a particular foodstuff or special permission is granted by: Service de la Repression des Fraudes, 13 rue Saint Georges, 75009 Paris, France.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
Fish – preserved, semi-preserved, frozen, canned	Ascorbic acid	E300	300	300
	Ascorbate, calcium~, sodium~	E302,E301		
	Ascorbyl palmitate	E304		
Colours				
Only the following may be coloured:				
Shrimp	Annatto	E160(b)	30 amount used should be the minimum necessary to obtain a roseate colouring	
	Anthocynanins	E163		
	Beetroot red	E162		
	Black PN	E151		
	Canthaxanthin	E161(g)		
	Caramel	E150		
	Carbon black	E153		
	Carmine	E120		
	Carmoisine	E122		
	β-carotene	E160(a)		
	Carotenoids	Various		
	β-apo-8'-carotenal and ethyl ester of b-apo-8'-carotenal	E160(e),E160(f)		
	Chlorophyll	E140		
	Copper chlorophyll	E141		
	Curcumin	E100		
	Erythrosine BS	E127		
	Green S	E142		
	Indigo carmine	E132		
	Patent blue V	E131		
	Ponceau 4R	E124		
	Quinoline yellow	E104		
	Riboflavin	E101		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Xanthophylls	E161		
Caviar	As in (a)		minimum necessary	
Caviar substitutes	Amaranth	E123		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish – smoked (gadoid species)	Carmine	E120	100	
	Carotenoids	Various		
	Ponceau 4R	E124		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
Cod – salted	Whitening agents:-			
	Sulphur dioxide	E220	1000	
	Sulphite, sodium~, sodium hydrogen~ (bisulphite),	E221,E222		
	Metabisulphite, potassium~, sodium~	E224,E223		
Emulsifiers and Stabilisers				
Fish products	Agar	E406	10×10^3	
	Alginate, ammonium~, potassium~ sodium~	E403,E402,E401		
	Carrageenan	E407		
	Gum arabic, guar~, locust bean~	E414,E412,E410		
	Pectins	E440(a)		
	Tragacanth	E413		
	Xanthan gum	E415	1000	
	Modified starches	–	50×10^3	
Surimi	Polyphosphates	E450,E544,E545	3000	
Fish pastes	Sorbitol	E420(i)	40×10^3	
Preservatives				
Caviar	Benzoate, sodium~	E211	1000	
Other fish roe in semi-preserve products	Hexamethylenetetramine	E239		
Prepared fish and other fishery products	Sulphur dioxide	E220	1000	
	Sulphite, sodium~, sodium hydrogen~ (bisulphite),	E221,E222		
	Metabisulphite, potassium~, sodium~	E224,E223		
Fish – dried	Sulphur dioxide	E220	1000 (residual SO_2)	
Shrimp – cooked flesh (Crangon crangon)	Benzoic acid	E210	2000	
	Benzoate, sodium~	E211		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Shrimps and prawns (cooked flesh)	Sulphite, sodium~, sodium hydrogen~ (bisulphite)	E221,E222	1000	(as SO_2 in cooked flesh)
	Metabisulphite, potassium~, sodium~	E224,E223		
	Citric acid	E330	30	
Flavour Enhancing Agents				
Fish products	Glutamate, monosodium~	621	500	
	Guanylic acid and salts of~	-,627		
	Inosinic acid and salts of~	-,631		

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
General: For most fishery products, no limits have been established				
Freshwater fish, edible portion	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane	50-29-3	2	
	Dieldrin	60-57-1	0.15	
	Endrin	72-20-8	0.3	
	HCH (BHC) (Hexachlorocyclohexane)	608-73-1	0.3	
	HCB (Hexachlorobenzene)	118-74-1	0.3	
	Mirex	2385-85-5	0.1	
Contaminants				
General: For most fishery products, no limits have been established				
i) Organochlorine				
Freshwater fish, edible portion	PCBs (Polychlorinated biphenyls)		2	

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
ii) Heavy metals			
Fish, crustacea and molluscs	Total mercury	0.5	
Tuna and swordfish	Total mercury	0.7	
iii) Other trace elements		No limits established	
Natural Toxin			
Clams, Mussels, Oysters (Fresh, frozen and canned)	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit: Number of viable organisms per gram of product
General: Previous certification of factories is required for the following 3 categories of products: cooked, peeled shrimp; chopped and minced fish flesh; prepared dishes, cooked or pre-cooked.		
Fish - pasteurised, semi-preserves	Aerobic total viable count (TVC) (30°C)	10^4
	Coliforms	None in 1 g
	Staphylococcus aureus	None in 1 g
	Anaerobic sulphite reducers	None in 1 g
	Salmonella spp	None in 25 g

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
Fish - non-pasteurised, semi-preserves (rollmops, red herrings, anchovies, in salt or oil	Aerobic TVC (30°C)	10^5
	Coliforms	None in 1 g
	Staphylococcus aureus	None in 1 g
	Anaerobic sulphite reducers	None in 1 g
	Anaerobic sulphite reducers (for anchovies in brine)	<10
	Salmonella spp	None in 25 g
Fish - steaks/fillets, crumbed or not	Aerobic TVC (30°C)	10^5
	Faecal coliforms	10
Fish - fresh fillets, chilled	Staphylococcus aureus	100
	Anaerobic sulphite reducers	10
	Salmonella spp	None in 25 g
Fish - steaks/fillets, crumbed or not, frozen	Aerobic TVC (30°C)	5×10^4
	Faecal coliforms	10
	Staphylococcus aureus	100
	Anaerobic sulphite reducers	2
	Salmonella spp	None in 25 g
Fish - raw minced flesh, preparations based on -	Aerobic TVC (30°C)	5×10^5
	Faecal coliforms	100
	Staphylococcus aureus	100
	Anaerobic sulphite reducers	10
	Salmonella spp	None in 25 g
Salmon - smoked Haddock and other fish - lightly salted and smoked	Aerobic TVC (30°C)	10^6
	Coliforms	None in 1 g
	Staphylococcus aureus	1
	Anaerobic sulphite reducers	None in 1 g
	Salmonella spp	None in 25 g
Bivalve shellfish, Sea urchins } live	Faecal coliforms	300/100 ml
	Faecal streptococci	2,500/100 ml
	Salmonella spp	None in 25 g
Crustacea, (other than shrimps/prawns) } whole, cooked, chilled	Aerobic TVC (30°C)	10^5
	Faecal coliforms	1
	Anaerobic sulphite reducers	2
	Salmonella spp	None in 25 g
Crustacea, (including shrimps/prawns) } whole, cooked or raw, frozen	Aerobic TVC (30°C)	1,000
	Faecal coliforms	1
	Anaerobic sulphite reducers	2
	Salmonella spp	None in 25 g

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
Prawns/shrimps – cooked, shelled, chilled or frozen	Aerobic TVC (30°C) Faecal coliforms Staphylococcus aureus Anaerobic sulphite reducers Salmonella spp	10^5 10 100 10 None in 25 g
Scallops, Mussels } precooked	Aerobic TVC (30°C) Faecal coliforms Staphylococcus aureus Anaerobic sulphite reducers Salmonella spp	10^6 10 100 30 None in 25 g
Frogs legs – chilled or frozen	Aerobic TVC (30°C) Faecal coliforms Staphylococcus aureus Salmonella spp	5×10^4 100 100 Absent in 25 g

Labelling

General: As per EEC directive (see table 3a)

Additional requirements: Language – must be in French.

Names – trade or fanciful names may be used as well as the name of the product but it must not be possible to confuse them and must not be misleading.

Country of origin must be given where its omission could confuse the true origin.

Quantities may be expressed as a number of units together with shell diameter for snails and oysters in their shells.

Quantity may be indicated by volume for mussels in their shells.

Lot numbers must be declared (for preserves, semi-preserves and frozen products) as follows:

either (a) "Lot ..." followed by the date of manufacture and, where necessary, manufacturer's symbol. Date of manufacture is considered as day of manufacture, or packing, or day of deep-freezing for deepfrozen foods, or that of first freezing for frozen products, and need be expressed as (i) day, month, year or (ii) four or five figures, with the first three corresponding to the day of manufacture (ie, a figure from 001 to 366) and the last one or two figures as the last one or two figures of the year of manufacture, or (iii) day of month and month, or three figures followed by indication of the year.

(b) Imported products may carry instead declaration of production lot peculiar to their country of origin, provided the authorities are notified prior to importation.

Note, frozen fish (whole, fillets, fish fingers, slices, steaks), salted herring and cod fillets are normally sold in prescribed quantities.

Vitamin claims are not permitted.

Added colour must be declared by the word 'colorant' followed by the EEC serial number of the colour.

GERMANY, FEDERAL REPUBLIC OF

PERMITTED ADDITIVES

General: There are lists of generally acceptable additives, and of colours, antioxidants and preservatives which are permitted provided that the compositional regulations on a particular foodstuff do not prohibit their use. With respect to additives other than those listed here, permission must be obtained from: Bundes – Ernahrungsministerium, Bonn 53, Federal Republic of Germany.

Note: Acetic acid, lactic, citric, L-malic and tartaric acids are not considered to be additives. The following substances may be used in foodstuffs without restriction and without declaration subject to compositional requirements:

Acetic acid	E260	E263	E261	E262			
Citric acid	E330	–	E332	E331			
Lactic acid } calcium, potassium, sodium salts of~	E270	E327	E326	E325			
Malic acid	296	352	351	350			
Tartaric acid	E334	–	–	E335			
Ascorbate, calcium~, sodium~	E302	E301					
Carbonate, calcium~, magnesium~, potassium~, sodium~	E170	504	501	500			
Chloride, calcium~, sodium~	509	–					
Glycerin	E422						
Gum arabic	E414						
Lecithin	E322						
Mono- and diglycerides of food fatty acids	E471						
Ascorbyl-6-palmitate	E304						
Ortho- and pyrophosphate, calcium~, potassium~, sodium~ (except for fresh fish)	E341	E340	E339	540	E450(a)	E450(a)	
Sulphate, calcium~, potassium~, sodium~	516	515	514				
Synthetic tocopherols	E307	E308	E309				
Starches, oxidised	–						

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
General:	Generally permitted antioxidants may be used, these are:			
	Ascorbic acid	E300	No limits established	
	Ascorbate, calcium~, sodium~	E302,E301		
	Ascorbyl palmitate	E304		
	Citric acid	E330		
	Citrate, calcium~, potassium~, sodium~	–,E332,E331		
	Lactic acid	E270		
	Lactate, calcium~, potassium~, sodium~	E327,E326,E325		
	Lecithin	E322		
	Orthophosphate, calcium~, potassium~, sodium~	E341,E340,E339		
	Tartaric acid	E334		
	Tartrate, potassium~, sodium~, sodium-potassium~	–,–,E337		
	Tocopherols (synthetic) alpha–, gamma– and delta–	E307,E308,E309		
	Tocopherol-containing extracts of natural origin	E306		
	Mono- and di-glyceride	E471		
	Fatty acids (edible), esterified with citric acid	E472(c)		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Colours				
General: All foods	Caramel	E150	No limits established	
	β-carotene	E160(a)		
	Riboflavin (lactoflavin)	E101		
	Gold	E175		
	Silver	E174		
Anchovy paste Norway lobster (scampi) – canned Shrimps – canned 'Seelachs' (canned salmon substitute using saithe and other salted gadoids) Roe (except smoked roe)	Amaranth	E123	No limits established	
	Annatto	E160(b)		
	Anthocyanins	E163		
	Beetroot red	E162		
	Black PN	E151		
	Brilliant acid green BS	E142		
	Calcium carbonate (surface colouring only)	E170		
	Caramel	E150		
	Carbon black	E153		
	Carmine	E120		
	Carmoisine	E122		
	β-carotene	E160(a)		
	β-apo-8'-carotenal and ethyl ester of ~	E160(e),E160(f)		
	Chlorophyll	E140		
	Copper chlorophyll	E141		
	Curcumin	E100		
	Erythrosine	E127		
	Green S	E142		
	Quinoline yellow	E104		
	Patent blue V	E131		
	Ponceau 4R	E124		
	Riboflavin (lactoflavin)	E101		
	Riboflavin 5'-phosphate	E101(a)		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Xanthophylls	E161		
Emulsifiers and Stabilisers				
General:	Other than those listed below for specific products, only the substances given in the general list may be used (see earlier)			
Fish pastes	Agar	E406	GMP	20×10^3 including generally permitted emulsifiers and stabilisers
	Alginic acid	E400		
	Alginate, calcium~, potassium~, sodium~	E404,E402,E401		
	Carob gum	E410		
	Carrageenan	E407		
	Glycerol	E422		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Guar gum	E412	GMP	20×10^3 including generally permitted emulsifiers and stabilisers
	Gum, -arabic, -tragacanth	E414,E413		
	Lecithin	E322		
	Methyl cellulose, sodium carboxymethyl cellulose	E461,E466		
	Mono and diglycerides	E471		
	Ortho and pyrophosphates, calcium-, potassium-, sodium-	Various		
	Pectin	E440(a)		
	Starches, oxidised	-		
	Xanthan gum	E415		
Sauces for fish products	As given for fish pastes			
	Propylene glycol alginate	E405	20	
Preservatives				
General: Only the fishery products listed below may contain preseratives				
Anchovy, Herring, Sprats - semi-preserves, including liquors and sauces	Benzoic acid	E210	4000	
	p-Hydroxybenzoic acid esters	E214 to E219	2000	
	Formic acid	E236	1000	
	Sorbic acid	E252,E251	2500	
	Nitrate, potassium-, sodium-	E200	200 in finished product, including nitrites produced from nitrates (calculated as sodium nitrate)	200
Prawn, Shrimp - unsterilised products	Benzoic acid	E210	4000	
	p-Hydroxybenzoic acid esters	E214 to E219	2000	
	Formic acid	E236	500	
	Sorbic acid	E200	2500	
Crab preparations (eg crab butter, crab flour) unsterilised (except powder for crab soup)	Benzoic acid	E210	4000	
	p-Hydroxybenzoic acid esters	E214 to E219	1500	
	Formic acid	E236	500	
	Sorbic acid	E200	2500	
Fish, Mussel - marinades	Benzoic acid	E210	2500	
	p-Hydroxybenzoic acid esters	E214 to E219	1000	
	Formic acid	E236	500	
	Sorbic acid	E200	2000	
Fish products - marinaded, fried, cooked (including their liquors and sauces)				

Additives – preservatives
flavours
Hazards – pesticides

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish paste with less than 10% salt 'Seelachs' in oil (salmon substitute)	Benzoic acid	E210	4000	
	p-Hydroxybenzoic acid esters	E214 to E219	1200	
	Formic acid	E236	500	
	Sorbic acid	E200	2000	
Fish – salted, in oil Herring (salted) products	Benzoic acid	E210	2500	
	p-Hydroxybenzoic acid esters	E214,E216,E218	1200	
	Formic acid	E236	500	
	Sorbic acid	E200	2000	
Roe products (except smoked roe)	Benzoic acid	E210	4000	
	p-Hydroxybenzoic acid esters	E214,E216,E218	800	
	Formic acid	E236	1000	
	Sorbic acid	E200	2000	
Flavour Enhancing Agents				
All fish and fishery products	Amino acids (except for glutamic acid)	–	No limits established	
	Glutamic acid	E620	10×10^3)	10×10^3
	Glutamate, potassium~, sodium~	E622,E621	10×10^3)	
	Guanylate, potassium~, sodium~	E628,E627	500)	500
	Inosinate, potassium~, sodium~	E632,E631	500)	
	Maltol	E636	10	
	Ethylmaltol	E637	50	

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
All fish and fishery products (including shellfish)	Dichlorbenil	1194-65-6	5.0	
	HCB (Hexachlorobenzene)	118-74-1	0.5 pertaining to fat content	
	HCH-isomers (except lindane)	608-73-1	0.5 pertaining to fat content	
	Lindane	58-89-91	2.0 pertaining to fat content	
	Simazine	122-34-9	0.01)(calculated on the basis	
	Terbutryne	886-50-0	0.3) of the weight of fresh fish used in production	

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
All fish and fishery products (excluding shellfish)	2-aminobutan	13952-84-6	0.01	
	Carbophenothion	786-19-6	0.01	
	Chlorobenzilate	510-15-6	0.01	
	Chlorbromuron	13360-45-7	0.01	
	Chlordane and	57-47-9	) 0.01	
	Oxychlordane (calculated as chlordane)	26880-48-8	)	
	Chloroneb	2675-77-6	0.01	
	Coumaphos	56-72-4	0.01	
	Crotoxyphos	7700-17-6	0.01	
	Crufomate	299-86-5	0.01	
	2,6-dichlorobenzamide	2008-58-4	0.5	
	Diphenamid	957-51-7	0.01	
	Dipropyl isocinchomeronate	136-45-8	0.01	
	Endrin and delta ketoendrin (calculated as endrin)	72-20-8	0.01	
	Ethion	563-12-2	0.01	
	Famophos	52-85-7	0.01	
	Fenchlorphos	299-84-3	0.01	
	Fenoprop	93-72-1	0.01	
	Heptachlor and	76-44-8	) 0.01	
	Heptachlorepoxid (calculated as heptachlor)	1024-57-3	)	
	Jodfenphos	18181-70-9	0.01	
	Mirex	2385-85-5	0.01	
	Naled (dibrom)	300-76-5	0.01	
	Nitrapyrin and 6-chloropicolinic acid	1929-82-4	) 0.01	
	(calculated as nitrapyrine)		)	
	Profluralin	26399-36-0	0.01	
	Propanil	709-98-8	0.01	
	Propargite	2312-35-8	0.01	
	Trifenmorph	1420-06-0	0.01	
Eels, Salmon, Sturgeon } and their products (except roe products)	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane	50-29-3	} 3.5	} 3.5 calculated as DDT in fresh fish
	DDD (TDE) 2,2-Bis(4-chlorophenyl)-1,1-dichloroethane	72-54-8		
	DDE and isomers 2,2,-Bis(4-chlorophenyl)-1,1-dichloroethylene	72-55-9		
Other fish, Shellfish } and their products (except those of their liver and roe)	DDT	50-29-3	} 2.0	} 2.0 calculated as DDT in fresh fish
	DDD	72-54-8		
	DDE and isomers	72-55-9		
Liver, Roe } and their products	DDT	50-29-3	} 5.0	} 5.0 calculated as DDT in fresh fish
	DDD	72-54-8		
	DDE and isomers	72-55-9		
Eel, Salmon, Sturgeon } and their products Fish liver and roe products	Aldrin	309-00-2	} 1.0	} 1.0 calculated as dieldrin
	Dieldrin	60-57-1		
Other fish and shellfish products (except products from fish liver and roe)	Aldrin	309-00-2	} 0.5	} 0.5 calculated as dieldrin
	Dieldrin	60-57-1		

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Contaminants			
i) Organochlorine compounds			

Polychlorinated biphenyls (IUPAC No)	28	52	101	138	153	180	
Marine fish and Shellfish and products	0.08	0.08	0.08	0.1	0.1	0.08	calculated on the basis of fresh weight of edible portion and proportion of fish in products
Fresh water fish and products	0.2	0.2	0.2	0.3	0.3	0.2	
Cod liver and products	0.4	0.4	0.4	0.6	0.6	0.4	calculated on the basis of the weight of the refined oil fraction used

ii) Heavy Metals			
Most fish and fish products	Cadmium, Lead, Mercury	0.5	Calculated using the fresh weight of the edible parts
Fish and products of the following species			
Eel, Pike and pike-perch, Blue ling, Shark, greenland~, mackerel~ (porbeagle), Catfish, Redfish, Swordfish, Sturgeon, Atlantic halibut	Mercury	1.0 –	Calculated using the fresh weight of the edible parts
Fish – canned	Lead	1.0 –	Calculated using the fresh weight of the edible part

Hazards – contaminants
– toxins
– radionuclides

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Squid and products	Cadmium Lead	0.5 0.5	(Guidelines) Calculated using the fresh weight of the edible part
iii) Other trace elements	No limits established		
Natural Toxins			
General: Fish of the genera tetraodontidae, molidae and dioodontidae must not be placed on the market			
Crustaceans and shellfish products	DSP (Diarrhetic shellfish poison) PSP (Paralytic shellfish poison)	Nil 0.4	
Fish and fish products	Histamine	100 (mean of 10 representative samples) 200 (for up to 2 of the 10 individual samples)	
Radionuclides			
General:	a) CS 137 (Caesium 137) Cs 134 (Caesium 134)	600 Bq/kg 600 Bq/kg	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
General:	No microbiological limits established	

LABELLING

General: As per EEC directive (see table 3a)

Additional requirements: Language - must be in German.

Numerical declarations of net quantity - minimum heights must be as follows -

for 5 to <50 g or ml	2 mm
50 to <200 g or ml	3 mm
200 to 1000 g or ml	4 mm
>1000 g or ml	6 mm

- for multiple units packs, the minimum type size depends upon the quantity of the individual pack, as follows -

for <50 g or ml	3 mm
≥50 g or ml	6 mm

Substitutes - there must be some indication of the fact that substitute materials have been used and that preservatives and colouring matter have been added. Thus, "seelachs' must be marked as 'Lachersersatz' (salmon substitute) and, in the case of products made using fish roe, the type of fish from which the roe was obtained must also be stated. (Lack of such information causes substitute products to be regarded as adulterated)

Additives - must be stated together with their EEC serial number.

Colours - the presence of colours must be declared by the statement 'mit parbatoff'. Caramel, lactoflavin (riboflavin) and β-carotene may be used generally without declaration unless there is a regulation prohibiting the addition of any colours.

Weight - packed foods must, on average, contain the stated quantity and no one pack shall contain less than the minimum laid down by law.

- drained weight must be stated for solid products packed in a liquid medium which is not usually consumed, and must be given next to the total weight and in the same size of type.

- net weight of the fish must be stated for products containing components other than fish.

- any loss of weight as a result of any treatment of the product after packing or filling into ready use of packaging this must be made clear by an indication of the type of treatment with the statement: "weight loss due to ..."

- for canned fish products the capacity of the containers are standardised and the standardised volume must be stated on the container without the unit of measurement. If this numerical value in not on the container it must be stated on the label. Where the product consists of a solid mass of fish together with an infusion liquid, the container volume, the total quantity and the drained weight are required.

Minimum shelf-life date must be stated using the words "can be kept at least until ..." stating day, month and year in (uncoded) sequence.

GREECE

PERMITTED ADDITIVES

General: There are limits of generally permitted additives but permission must be obtained for the use of any additive not included in the relevant food standard. Authorization is required for the import of any foodstuff for which there is no standard of composition, or when additives are not included in the relevant standard from: The Supreme Chemical Council of State, General State Laboratory, 16a Tosha Street, Athens 602, Greece.

Each shipment must be accompanied by a health certificate.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
Only the following may contain antioxidants:				
Fish extracts, pulps, juices, soups, broths Fish in cans with or without vegetable products	Ascorbic acid	E300	4000	
Taramasalata	Permitted antioxidants may be used. They are:			
	Ascorbic acid (vitamin C)	E300	No limit established	
	BHA (Butylated hydroxyanisole)	E320	2000	
	BHT (Butylated hydroxytoluene)	E321	2000	
	Citric acid	E330	No limit established	
	Gallic acid, propyl~, octyl~ and dodecyl~ esters of	E310,E311,E312	200	
	Mixtures containing at least 34% tocopherols, of which at least 50% are alpha-tocopherols	E306/7/8/9	No limit established	
	Lecithin	E322		
	Phosphoric acid	E338		
	Tartaric acid	E334		
Colours				
Only the following may contain added colour:				
Taramasalata	May not be coloured except for carry-over from the caviar		Carry-over from caviar	
Salmon and similar species } smoked fillets	Red and yellow permitted colours		May be slightly coloured	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish roe, preserved Fish roe mixed with other types or roe and edible substances – preserved Red caviar paste	Permitted colours may be used, they are:		May be slightly coloured	
	Alkannet	–		
	Amaranth	E123		
	Annatto	E160(b)		
	Anthocynanins	E163		
	Beetroot red	E162		
	Black PN	E151		
	Brilliant blue FCF	133		
	Brown FK	154		
	Calcium carbonate (surface only)	E170		
	Caramel	E150		
	Carbon black	E153		
	Carmine	E120		
	Carmoisine	E122		
	β-carotene	E160(a)		
	Carotenoids	E160,E161		
	β-apo-8'-carotenal and ethyl ester of -	E160(e),E160(f)		
	Chlorophyll	E140		
	Copper chlorophyll	E141		
	Chocolate brown HT	154		
	Curcumin	E100		
	Erythrosine BS	E127		
	Green S	E142		
	Indigo carmine	E132		
	Lactoflavin	E101		
	Patent blue V	E131		
	Ponceau 4R	E124		
	Quinoline yellow	E104		
	Red 2G	128		
	Riboflavin 5'-phosphate	101(a)		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Xanthophylls	E161		
	Yellow 2G	107		
<u>Emulsifiers and Stabilisers</u>				
General:	Only permitted where stated in compositional standard:			
Fish roe mixed with other roe types and edible substances – preserved	Flours of vegetable gums and gelatin	Various	No limit established	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Preservatives				
Fish preserved in brine, oil or vinegar Fish extracts, pulps, juices, soups, broths Fish in cans with or without vegetable products	Nitrate, potassium~, sodium~	E252,E251	500 (based on the weight of the fish)	
Fish roe, mixed with other roe types and edible substances – preserved	Benzoic acid Benzoate, sodium~ Sorbic acid Sorbate, calcium~, potassium~, sodium~	E210 E211 E200 E203,E202,E201	1000	
Salmon and similar species } smoked fillets	Benzoic acid Benzoate, sodium~ Sorbic acid Sorbate, calcium~, potassium~, sodium~	E210 E211 E200 E203,E202,E201	500	
Crustaceans, frozen	Sulphur dioxide Sulphite, potassium~, sodium~ Metabisulphite, potassium~, sodium~	E220 –,E221 E224,E223	100	100
Fish and fish products, preserved with pH greater than 4.5	Hexamethylenetetramine	E239	500	
Caviar and other unsmoked fish roes	Hexamethylenetetramine	E239	1000	
Flavour Enhancing Agents				
General: Flavour enhancing agents are not permitted				

Hazards - pesticides
contaminants
toxins
radionuclides

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	Specified Limit	
		Individual (mg/kg)	Combined (mg/kg)
Pesticide Residues			
General:	No limits established		
Contaminants			
i) Organochlorine (PCBs)	No limits established		
ii) Heavy metals			
All fish and fish products	Methyl mercury	0.7	
iii) Other trace elements	No limits established		
Natural Toxins			
Clams, Mussels, Oysters — Fresh, frozen, canned	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
General	No microbiological limits established	

LABELLING

General: Similar to EEC directive (see table 3a)

Additional requirements: Language - must be Greek.

Location - on the main, clear side of the packing.

Date - the date of manufacture must be given on preserved foods (an authorised date coding may be used).

Agents - the commercial title, or name and address, of the agent, imported or packer must be stated. If the packer has 2 agents in Greece the particulars of both agents must be given.

Quantities - shall be stated as net weight or, for liquids, as net volume.

Place of origin - the country of manufacture must be stated. Where appropriate, the label must bear the phrase 'packed in Greece'.

Antioxidants - any added antioxidants must be declared together with its functional group and the amount added (as a percentage).

IRELAND, REPUBLIC OF

PERMITTED ADDITIVES

General: There are specific regulations concerning the use of additives. Some classes are restricted by compositional standards and others may be used in foods generally. Information on specific use and exemptions is available from: Department of the Marine, Leeson Lane, Dublin 2, Ireland.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
Fish and fishery products	L-ascorbic acid	E300	GMP	
	Ascorbate, calcium~, sodium~	E302,E301		
	Ascorbyl, ~diacetate, ~palmitate	–, E304		
	Citric acid	E330		
	Citrates, calcium~, potassium~, sodium~	–, E332,E331		
	Extracts of natural origin rich in tocopherol	E306		
	Synthetic alpha, delta and gama tocopherols	E307,E309,E308		
	Lecithin	E322		
	Lactic acid	E270		
	Lactate, calcium~, potassium~, sodium~	E327,E326,E325		
	Mono and diglycerides, citric acid esters of	E427(c)		
	Orthophosphoric acid	E338		
	Orthophosphates, calcium~, potassium~, sodium~	E341,E340,E339		
	Pyrophosphate, calcium~, potassium~, sodium~	540,–,E450(a)		
	Potassium polymetaphosphate	E450(c)		
	Sodium metaphosphate	–		
	Sodium tripolyphosphate	E450(b)		
	Tartaric acid	E334		
	Tartrate, potassium~, sodium~, sodium potassium~	E336,E335,E337		
Colours				
Fish, unprocessed	May not be coloured			
Fish products	Amaranth	E123	May be coloured – no quantitative limits established	
	Annatto	E160(b)		
	Anthocyanins	E163		
	β-carotene	E160(a)		
	Carotenoids	E160,E161		
	β-apo-8'-carotenal and ethyl ester of ~	E160(e),E160(f)		
	Beetroot red	E162		
	Black PN	E151		
	Brilliant blue FCF	133		
	Calcium carbonate (surface use only)	E170		
	Canthaxanthin	E161(g)		
	Carbon black	E153		
	Carmine	E120		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit	
			Individual (mg/kg)	Combined (mg/kg)
	Carmoisine	E122		
	Chlorophyll	E140		
	Copper Chlorophyll	E141		
	Curcumin	E100		
	Erythrosine BS	E127		
	Green S	E142		
	Indigo Carmine	E132		
	Lactoflavin	E101		
	Patent blue V	E131		
	Ponceau 4R	E124		
	Quinoline yellow	E104		
	Red 2G	128		
	Riboflavin 5'-phosphate	101(a)		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Xanthophylls	E161		
	Yellow 2G	107		
Emulsifiers and Stabilisers				
All products	Acacia (gum arabic)	E414	No quantitative limits established	
	Agar	E406		
	Alginate, ammonium~, calcium~, potassium~, sodium~, propane-1,2diol~	E403,E404,E402, E401,E405		
	Alginic acid	E400		
	Ammonium phosphatides (emulsifier YN)	442		
	Carragenan	E407		
	Cellulose, microcrystalline~, powdered~	E460(i),E460(ii		
	Cellulose, carboxymethyl~, ethylmethyl~, hydroxypropyl~, hydroxypropylmethyl~, methyl~	E466,E465,E463 E464,E461		
	Dioctyl sodium sulphosuccinate	–		
	Fatty acids, mono- and di-glycerides of~	E471		
	acetic acid esters of~	E472(a)		
	citric acid esters of~	E472(c)		
	lactic acid esters of~	E472(b)		
	mixed acetic/tartaric acid esters of~	E472(a)+E472(d)		
	mono- and diacetyltartaric acid esters of~	E472(e)		
	sucrose esters of~	E473		
	tartaric acid esters of~	E472(d)		
	polyglycerol esters of	E475		
	propane-1, 2-diol esters of	E477		
	Glycerol	E422		
	Guar gum	E412		
	Karaya gum or sterculia gum	416		
	Lactylated fatty acid esters of glycerol and propane-1,2-diol	478		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Lecithins	E322		
	Locust bean gum	E410		
	Mannitol	E421		
	Pectin, amidated pectin	E440(a),E440(b)		
	Polycondensed fatty acids of castor oil, partial polyglycerol esters of~	476		
	Polyoxyethylene (8) stearate	430		
	Polyoxyethylene (40) stearate	431		
	Polyoxyethylene (20) sorbitan monostearate (polysorbate 60)	435		
	Polyoxyethylene (20) sorbitan tristearate (polysorbate 65)	436		
	Polyoxyethylene (20) sorbitan mono-oleate (polysorbate 80)	433		
	Polyphosphate, potassium~ sodium~	E450(c),E450(c)		
	Diphosphate, disodium dihydrogen~ (sodium acid salt of pyrophosphoric acid) trisodium~ tetrasodium~	E450(a)		
	Orthophosphate, calcium~, potassium~, sodium~	E341,E340,E339		
	Triphosphate, pentasodium~ (sodium tripolyphosphate) pentapotassium~	E450(c) E450(b)		
	Pyrophosphate, potassium~	–		
	Sorbitol	–		
	Sorbitol, syrup	E420(i),E420(ii		
	Sorbitan monolaurate	493		
	Sorbitan mono-oleate	494		
	Stearoyl-2-lactylate, calcium~, sodium~	E482,E481		
	Stearyl tartrate	E483		
	Sucroglycerides	E474		
	Tragacanth	E413		
	Xanthan gum	E415		
	Certain other substances such as some Citrates Tartrates Starches and modified starches are permitted for use even though they are not classified as emulsifiers under Irish law.			
Preservatives				
General:				
i) The following are permitted freely in foods	Acetic acid	E260		
	Acetate, calcium~, potassium~, sodium di~	E263,E261,E262		
	Carbon dioxide	E290		
	Lactic acid	E270		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
ii) A product containing two or more preservatives may contain a mixture only if the quantities of each such preservative present in that food, expressed as a percentage of the maximum quantity permitted in that food, when added together do not exceed 100.				
Cod roe - spiced	Hexamine	E239	2000	
Herring, Mackerel } marinated, pH exceeds 4.5	Benzoic acid	E210	1000	
	Hexamine	E239	50	
	p-Hydroxybenxoate, ethyl methyl-, propyl-	E214,E218,E216	1000	see note (ii) (above)
Herring, Mackerel } marinated, pH does not exceed 4.5	Benzoic acid	E210		
	p-Hydroxybenzoate, ethyl-, methyl- or propyl-	E214,E218,E216	1000	
Flavour Enhancing Agents				
General: Flavourings and flavour enhancing agents are not permitted for use in fishery products				

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues			
General:	No limits established		
Contaminants			
General:	No limits established		

Hazards - toxins
radionuclides
Microbiological Standards
Labelling

Fish Product	Hazardous Substance	Specified Limit	
		Individual (mg/kg)	Combined (mg/kg)
Natural Toxins			
Clams, Mussels, Oysters } Fresh, frozen, canned	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit
		Number of viable organisms per gram of product
General:	No microbiological limits established.	

LABELLING

General: As per EEC directive (see table 3a)

Additional requirements: Language - must be English.

Type size - minimum size for figures used in quantity markings are:

<200 m or ml	3 mm
>200 to 1000 g or ml	4 mm
>1000 g or ml	6 mm

ITALY

PERMITTED ADDITIVES

General: There is a list of permitted food additives; permission to use additives other than those listed must be obtained from: Ministero per la Sanita, Palazzo Viminale, Via Aqostino de Pretis, 00100 - Rome, Italy.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit	
			Individual (mg/kg)	Combined (mg/kg)
Antioxidants				
General:	Antioxidants are not permitted for use in most fishery products.			
Canned fish products	Ascorbic acid	E300	2000 (expressed as ascorbic acid)	
	Ascorbates, potassium~, sodium~	-, E301		
	Ascorbyl diacetate	-		
Colours				
General: Only the following may be coloured:				
Caviar	Amaranth	E123	No quantitative limits established	
Caviar substitutes	Amaranth	E123	No quantitative limits established	
	Annatto	E160(b)		
	Anthocynanins	E163		
	b-carotene	E160(a)		
	Carotenoids	E160/E161		
	b-apo-8'-carotenal and ethyl ester of ~	E160(e),E160(f)		
	Beetroot red	E162		
	Black PN	E151		
	Calcium carbonate (surface only)	E170		
	Canthaxanthin	E161(g)		
	Caramel	E150		
	Carbon black	E153		
	Carmine	E120		
	Carmoisine	E122		
	Chlorophyll	E140		
	Copper chlorophyll	E141		
	Curcumin	E100		
	Erythrosine BS	E127		
	Green S	E142		
	Indigo carmine	E132		
	Lactoflavin	E101		
	Patent blue V	E131		
	Ponceau 4R	E124		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Quinoline yellow	E104		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Xanthophylls	E161		
Cod fillets – dried, salted	For bleaching:			
	SO_2 (Sulphur dioxide)	E220	600	Mixtures must not be harmful to health. Sum of proportions of each substance must not exceed 100%
	Sulphite, calcium~, sodium~	E226,E221		
	Bisulphite, calcium~, potassium~, sodium~	E227,–,E222		
	Metabisulphite, potassium~, sodium~	E224,E223		
Emulsifiers and Stabilisers				
General: Only the following may contain added emulsifiers:				
Cod – dried, canned Fish – semi-preserved	Agar	E406	2000	
	Carregeenan	E407		
Preservatives				
General: Only the following may contain added preservatives:				
Caviar Caviar imitations	Benzoic acid	E210	1500	Mixtures must not be harmful to health. Sum of proportions of each substance must not exceed 100%
	Benzoate, calcium~, potassium~, sodium~	E213,E212,E211	1500	
	p-Hydroxybenzoate, ethyl~, methyl~, propyl~ and their sodium salts	E214 to E219	1000	
	Formic acid	E236		
	Formate, calcium~, sodium~	E238,E237	1000 1000	
Cod fillets – dried, salted Crayfish – preserved, fresh or frozen Crustaceans – fish, of the Macrura type 'Crostacei brachiuri' (a type of crustacean)	SO_2 (Sulphur dioxide)	E220	350 (in the flesh)	Mixtures must not be harmful to health. Sum of proportions of each substance must not exceed 100%
	Sulphite, calcium~, sodium~	E226,E221		
	Bisulphite, calcium~, potassium~, sodium~	E227,–,E222		
	Metabisulphite, potassium~, sodium~	E224,E223		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish roe	Formic acid Formate, calcium~, sodium~	E236 E238,E237	1000	Mixtures must not be harmful to health. Sum of proportions of each substance must not exceed 100%
Flavour Enhancing Agents				
General: Flavourings and flavour enhancing agents are not permitted for use in fishery products				

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
a) All fish and fishery products	Aldrin	309-00-2	0.1	
	Dieldrin	60-57-1	0.1	
	Alpha and beta PHC	114-26-1	0.1	
	Chlordane (isomers and metabolites)	57-74-9	0.1	
	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane or with	50-29-3	0.01	0.01
	DDD 2,2-Bis(4-chlorophenyl)-1,1-dichloroethane	72-55-9		
	Heptachlor and its hepoxide (isomers and metabolites)	76-44-8	0.1	
Contaminants				
i) Organochlorine	PCBs (Polychlorinated biphenyls)		No limits established	
ii) Heavy metals				
All fish and fishery products	Total mercury		0.7 calculated on weight of fresh fish used	

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Molluscs (farmed)	Lead	2.0	
Cephalopods	Cadmium	2.0	
iii) Other trace elements		No limits established	
Natural Toxins			
Clams, Mussels, Oysters (Fresh, frozen, canned)	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
All edible molluscs except lamellibranch	Escherichia coli	39/ml (flesh and body liquid) liquid)
Edible lamellibranch molluscs for direct consumption or freezing	Escherichia coli	4/ml (flesh and body liquid)
	Salmonella spp	None in 25 ml (flesh and body liquid)

LABELLING

General: As per EEC directive (see table 3a)

Additional requirements: Language - must be Italian.

Frozen products - must have thawing instructions in a specific format
- must have storage instructions

Additives - antioxidants, emulsifiers, stabilisers and preservatives must be declared by functional group followed by the name or EEC serial number.

- It is not necessary to declare them in compound foods if their total quantity does not exceed 5% (for antioxidants and preservatives) or 10% (for emulsifiers and stabilisers) of the highest permitted for any one food ingredient.

Statements - importation is subject to a statement, prepared by the importer or his legal representative, on or attached to the customs declarations, to the effect that the foodstuffs comply with the regulations in force in Italy.

JAPAN

PERMITTED ADDITIVES

General: There is a list of permitted additives dealing with synthetic chemicals (those which either do not occur naturally or are not obtained from natural sources). Use of synthetic chemical compounds as food additives is limited to those which have been permitted. Natural substances, such as a colouring matter contained in a vegetable, can be used without permission except when it is harmful to human health. Chemically synthesised additives (except for sodium hypochlorite) should not be used in the processing of raw oysters and other fish and shellfish products intended to be eaten raw. Additional information can be obtained from: Food Sanitation Division, Ministry of Health and Welfare, 2-2 Kasumigaseki, 1-Chome, Tokyo, Japan,

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
General:	Ascorbic acid is listed as a dietary supplement and its use is not restricted.	E300	No limits established	
	Erythorbic acid are permitted as antioxidants in all foods	–		
	Sodium erythorbate are permitted as antioxidants in all foods	–		
	α-Tocopherol are permitted as antioxidants in all foods	E307		
Fish, Shellfish dried, salted	BHA (Butylated hydroxyanisole)	E320	200	200
	BHT (Butylated hydroxytoluene)	E321		
Fish, Shellfish, Whalemeat for water glazing of frozen material	BHA	E320	1000	1000
	BHT	E321		
Colours				
General: All fish may be coloured with natural colours. Natural colours must be of natural origin				
Fish, Shellfish processed (not fresh fish or shellfish)	May be coloured with permitted coal tar colours, ie		No limits established	
	Acid red	–		
	Amaranth	E123		
	Brilliant blue	133		
	Erythrosine	E127		
	Fast green FCF	–		
	Indigo carmine	E132		
	Phloxine	–		
	Ponceau 4R	E124		
	Rose bengale	–		
	Sunset yellow FCF	E110		
	Tartrazine	E102		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Emulsifiers and Stabilisers				
General:				
Listed permitted additives which may be used in all foods generally:				
	Alginate, propylene glycol~, sodium~	E405,E401	10×10^3	
	Casein	–	No limit specified	
	Caseinate, sodium~	–	No limit specified	
	Cellulose, calcium carboxymethyl~, sodium carboxymethyl~, methyl~	–,E466 E461		
	Fatty acid ester, glycerol~, propylene glycol~, sucrose~, sorbitol~	–,E473 491 to 495		
	Lecithin and other soyabean phospholipids	E322		
	Metaphosphate, potassium~, sodium~	–,–	20000	
	Phosphate, (dibasic), ammonium~, dibasic potassium~, sodium~	–,E340(b)E339b	20000	
	Phosphate, (tribasic), potassium~, sodium~	E340(c),E339(c)	20000	
	Phosphate, anhydrous dibasic sodium~, anhydrous tribasic sodium~	–,–	20000	
	Polyphosphate, potassium~, sodium~	E450(c),E450(c)	20000	
	Pyrophosphate, potassium~, sodium~	E450(a),E450(a)	20000	
	Pyrophosphate, anydrous sodium~, disodium dihydrogen~	–,E450(a)	20000	
	Sodium polyacrylate	–	2000	
	Starch, sodium carboxymethyl~, sodium~phosphate	–		
Fish sausage	Sodium chondroitin sulphate	–	3000	
Natural substances, such as the following, may be used in all foods:				
	Carregeenan	E407		
	Gum, carob~, guar~	E410,E412		
	Pectin	E440(a)		
	Tragacanth	E413		
	Silicon resin (as an antifoaming agent)	–	0.05	
Fish sausage	Sodium chondroitin sulphate	–	3000	
Preservatives				
General: Only the following may contain added preservatives:				
Caviar	Benzoic acid	E210	2500	
	Benzoate, sodium~	E211	2500	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish, Shellfish, Tsukudani, Kasuzuke, Kojizuke, Shoyuzuke, Misozuke – Dried	Sorbic acid	E200	1000	
	Sorbate, potassium~	E202		
Fish paste, Sea urchin products	Sorbic acid	E200	2000	
	Sorbate, potassium~	E202		
Octopus, Cuttlefish – smoked	Sorbic acid	E200	1550	
	Sorbate, potassium~	E202		
Fish pickled in vinegar (suzuke)	Sorbic acid	E200	500	
	Sorbate, potassium~	E202		
Prawns – shelled	Sulphur dioxide (SO_2)	E220	100	
	Metabisulphite, potassium~	E124		
	Bisulphite, sodium~	E222		
	Hyposulphite, sodium~ (thiosulphate, sodium~)	–		
	Sulphite, sodium~ (anhydrous and hydrated)	E221		
Fish sausage	Nitrate, sodium~	E251	5	
Salmon, Codfish – roe	Nitrate, sodium~	E251	5	
Flavour Enhancing Agents	Glutamic acid	620	No limits established	
	Glutamate, sodium~, lysine~, arginine~	621,–,–		
	sodium 5'inosinate	631		
Other Miscellaneous Additives Permitted in Fish Products				
Processed fish products	Calcium~ carbonate, ~chloride, ~citrate, ~dihydrogen phosphate, ~glycerophosphate, ~gluconate, ~hydroxide, ~lactate, ~pantothenate, ~phosphate (monobasic, dibasic, tribasic), ~sulfate	E170,509,E333 E341(b),–,578 E327,–,E341 516	10×10^3 (as calcium)	
	Saccharin, sodium~	–	1200	
	Sulphur dioxide (SO_2)	E220	30 (residual SO_2)	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Other products				
Fish - canned, bottled	Saccharin, sodium~	-	200	
Fish paste	" "	-	300	
Fish preserved in:				
Soy sauce (tsukudani)	Saccharin, sodium~	-	500	
Vinegar (suzuke)	" "	-	2000	
Koji rice (Kijizuke)	" "	-		
Saki lees (kasuzuke)	" "	-	1200	
Soy bean paste (misozuke)	" "	-		
Soy sauce (shoyuzuke)	" "	-		

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues			
General:	No limits established		
Contaminants			
i) Organochlorine			
Fish, Shellfish } distant waters	PCBs (Polychlorinated biphenyls)	0.5 (in edible portion)	
Fish Shellfish } inland water	PCBs	3.0 (in edible portion)	
ii) Heavy metals			
All fish products	Total mercury	0.4	
All fish products except for tuna, billfish, rockfish, alfosin, black cod, red tanner crab, shark	Methyl mercury	0.3	

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
ii) Other trace elements	No limits established		
Natural Toxin			
Clams, Mussels, Oysters } Fresh, frozen, canned	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
For all frozen foods (except animal meat, whale meat, boiled octopus, raw oysters)		
i) Foods requiring only thawing	Aerobic total viable count (TVC)	10^5
	Coliforms	Absent
ii) Foods heated before being frozen; need cooking before eating	Aerobic TVC	10^5
	Coliforms	Absent
iii) Foods needing cooking before eating (except ii)	Aerobic TVC	3×10^6
	Escherichia coli	Absent
iv) Frozen shellfish and fresh fish needing only thawing, to be eaten raw	Aerobic TVC	10^5
	Coliforms	Absent

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
Ingredients for fish paste products (excluding minced fish) (sugar, starch and seasoning)	Coliforms	Absent
Octopus, boiled	Aerobic TVC Coliforms	10^5 Absent
Oysters, raw	Aerobic TVC Escherichia coli	5×10^4 230/100 g

LABELLING - regulations are to be revised during 1989.

The label - Location - on the outer retail package.
Visual clarity - type size should be a minimum of approximately 8 points for all characters
Language - must be Japanese.
Honesty and clarity - no specific information.

Contents on the label - Name of the product - must be given.

List of ingredients - must be declared on canned foods and on frozen foods. Additives must be declared in an additives section but class names can be substituted. Where chemically synthesised substances (other than colourings) have been used, the components and their weight percentages must be declared. The presence of any synthetic colour must be declared by name or by the words "synthetic colour".

The following substances must be declared by name or by words "synthetic thickening agent": sodium alginate, propylene glycol alginate, methyl cellulose, sodium carboxymethyl cellulose, calcium carboxymethyl cellulose, sodium carboxymethyl cellulose, sodium starch phosphate, sodium polyacrylate.

All preservatives except sorbic acid and sodium sulphite must be declared either by name or by the words "synthetic preservatives". Nitrite should be declared as "colour fixative", and nitrate as "colour fixative" or "fermentation regulator".

Quantity declaration - net contents must be stated in metric units.

Shelf life declaration - none required.

Other information required - Date of manufacture (if unknown, may be replaced by date of importation accompanied by a statement that it is the date of import). This may be replaced by a code on fish, fish sausage, raw oysters and fish paste which are packed in cans, bottles, casks or jars. If it is difficult to declare a date on the container, it may be declared elsewhere but a statement must be on the container indicating where the date has been declared.

Date codes shall consist of Roman letters and Arabic figures as follows: firstly, the last number of the year; secondly, the month of manufacture in Arabic figures except that October is O, November Y and December Z; finally, the day of manufacture (for a date below 10 a 0 must be placed before the unit).

The method of production (ie cooked before freezing) must be declared on such products.

If a standard method of using or preserving a food has been laid down by the Minister of Health and Welfare, this method must be declared.

The storage temperature of frozen products must be declared (below -18°C).

It is necessary to declare on frozen fish, shellfish and raw oysters whether they are for raw consumption or not (not required for wholemeat products, fish paste and boiled octopus).

Hermetically sterilised foods must be declared to this effect, ie the food was thermally sterilised under pressure after packing in an airtight container and sealed hermetically.

Wholemeat products, fish sausage, fish ham or fish paste which are packed in hermetically sealed containers and sterilised at 120°C for 4 minutes or by a method that is equally effective, must have the method of sterilisation declared.

Fish meat, sausage, ham and paste with a pH >5.5 and water activity >0.94 must have the pH and water activity declared (not required if canned or bottled).

Irradiated foods must be declared as such.

LUXEMBOURG

PERMITTED ADDITIVES

General: There is a list of permitted additives for use in fish products. If an additive is not on the list it may not be used. Information regarding regulations or applications for special permission to use other additives may be obtained from: Ministère de la Santé, 2935 – Luxembourg, Grand-Duché de Luxembourg.

Import of shrimp products will be allowed only from exporting companies registered with Benelux health authorities. Each shipment must be accompanied by a health certificate issued by the respective national agency. Requirements for the health certificate are in accordance with the Codex Alimentarius Recommended International Code of Practice for Shrimp and Prawns, and of the Recommended International Code of Practice, General Principles of Food Hygiene.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
General: Only the products listed below may contain antioxidants				
Fish, Fish products } frozen	Ascorbate, calcium~, sodium~	E302,E301	1000	
	Ascorbic acid	E300		
	Ascorbyl palmitate	E304		
	Tocopherols (alpha, gama and delta, and extracts of natural origin rich in tocopherols)	E307,E308,E309 E306		
Colours				
General: Only the following may contain added colouring substances:				
Anchovy paste Shrimps – canned Caviar substitutes Salmon substitutes	Amaranth	E123	Minimum necessary (GMP)	
	Annatto	E160(b)		
	Anthocyanins	E163		
	Beetroot red	E162		
	Black PN	E151		
	Carbon black	E153		
	Carmine	E120		
	Carmoisine	E122		
	β-carotene	E160(a)		
	Carotenoids	E160,E161		
	β-apo-8'-carotenal and ethyl ester of ~	E160(e),E160(f)		
	Canthaxanthin	E161(g)		
	Chlorophyll	E140		
	Copper chlorophyll	E141		
	Curcumin	E100		
	Erythrosine BS	E127		
	Green S	E142		
	Indigo Carmine	E132		
	Patent blue V	E131		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Ponceau 4R	E124	minimum necessary (GMP)	
	Quinoline yellow	E104		
	Riboflavin	E101		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Xanthophylls	E161		
Emulsifiers and Stabilisers				
General: Emulsifiers and stabilisers are not permitted in fishery products				
Preservatives				
Fish, Shellfish products	Benzoic acids (and salts of~)	E210 to E213	3000 Sum of proportions of each substance must not exceed 100% in finished product.	
	p-Hydroxybenzoate, ethyl~, methyl~, propyl~ (and sodium salts)	E214 to E219		
	Sorbic acid (and salts of ~)	E200 to E203		
	Nitrate, potassium~, sodium~	E252,E251	200 Including nitrites produced from nitrates (calculated as sodium nitrate)	
	Acetic acid	E260	No limit specified	
	Acetate, potassium~	E261		
Salmon semi-preserves Fish marinades Shrimp	Formic acid	E236	300 (expressed as the acid)	
	Formate, calcium~, sodium~	E238,E237		
Semi-preserves in salt or sugar	Formic acid	E236	1000 (expressed as the acid)	
	Formate, calcium~, sodium~	E238,E237		
Fish roe – unsmoked	Formic acid	E236	1000 (expressed as the acid)	
	Formate, calcium~, sodium~	E238,E237		
	Hexamethylene tetramine	E239	1000	
Caviar	Hexamethylene tetramine	E239	1000	

Additives – flavours
Hazards – pesticides
contaminants
toxins

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Flavour Enhancing Agents				
Fish, Shellfish } products	Glutamic acid	620	1000	1000
	Glutamate, potassium-, sodium-	622,621		

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
Eel, Salmon, Sturgeon } and derived products except roe	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane	50-29-3	3.5 (expressed as DDT)	3.5
	DDD (TDE) 2,2-Bis(4-chlorophenyl)-1,1-dichloroethane	72-54-8		
	DDE 2,2,-Bis(4-chlorophenyl)-1,1-dichloroethylene	72-55-9		
Other fish, Crustaceans, Molluscs } and derived products except liver products and fish eggs	DDT	50-29-3	2.0 (expressed as DDT) (reported on basis of fresh weight of fish)	2.0
	DDD	72-54-8		
	DDE	72-55-9		
Liver, Roe	DDT	50-29-3	5.0 (expressed as DDT) (reported on basis of fresh weight of the edible portion)	5.0
	DDD	72-54-8		
	DDE	72-55-9		
Contaminants	No limits established			
Natural Toxins				
Clams, Mussels, Oysters } Fresh, frozen, canned	PSP (Paralytic shellfish toxin)		0.8	

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Radionuclides				
	Cs 134 (Caesium 134)		600 Bq/kg	
	Cs 137 (Caesium 137)		600 Bq/kg	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit: Number of viable organisms per gram of product
Fish – fillet, breaded or not, chilled	Aerobic TVC (total viable count) (30°C)	10^5
	Faecal coliforms	10
	Staphyloccocus aureus	100
	Anaerobic sulphite reducers (46°C)	10
	Salmonella spp	Absent in 25 g
Fish – fillet, breaded or not, frozen	Aerobic TVC (30°C)	10^4
	Faecal coliforms	1
	Staphyloccocus aureus	100
	Anaerobic sulphite reducers (46°C)	2
	Salmonella spp	Absent in 25 g
Fish – products of minced flesh	Aerobic TVC (30°C)	5×10^5
	Faecal coliforms	100
	Staphyloccocus aureus	100
	Anaerobic sulphite reducers (46°C)	10
	Salmonella spp	Absent in 25 g
Scallops, Mussels } pre-cooked	Aerobic TVC (30°C)	10^6
	Faecal coliforms	10
	Staphyloccocus aureus	100
	Anaerobic sulphite reducers (46°C)	30
	Salmonella spp	Absent in 25 g
Crustacean shellfish except shrimp } whole, cooked, chilled	Aerobic TVC (30°C)	10^5
	Faecal coliforms	1
	Anaerobic sulphite reducers (46°C)	2
	Salmonella spp	Absent in 25 g

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
Crustacean shellfish - raw or cooked, frozen	Aerobic TVC (total viable count) (30°C) Faecal coliforms Anaerobic sulphite reducers (46°C) *Salmonella* spp	10^3 1 2 Absent in 25 g
Shrimp - cooked, peeled chilled or frozen	Aerobic TVC (total viable count) (30°C) Faecal coliforms *Staphyloccocus aureus* Anaerobic sulphite reducers (46°C) *Salmonella* spp	10^5 10 100 10 Absent in 25 g
Bivalve shellfish Sea urchins } live	Faecal coliforms Faecal streptococci *Salmonella* spp	300/100 ml 2500/100 ml Absent in 25 g
Frogs legs Snails (removed from the shell)	Anaerobic sulphite reducers (46°C) *Salmonella* spp	100 Absent in 1 g (provisional limit)

LABELLING

General - As per EEC directive - see Table 3a.

Additional requirements - must be either French, German or Luxembourgoise.

NETHERLANDS

PERMITTED ADDITIVES

General: There exists a 'Fish Decree' which concerns fish and shellfish, fresh or processed, prepared or unprepared and states that these commodities should be in good condition, be normal in smell, colour, taste and consistency and be free from harmful substances.

Ingredients used in the manufacture of fish products are limited to: flour, milk components, breadcrumbs, egg components, sugar, oil, herbs and spices except for minces, pastes and fish sausage (bread, rusk or potato may be included) and semi-preserves (artificial sweetening agents may be included in small amounts).

There is no list of generally permitted food additives. Where permitted, they are listed in the compositional standards for the foodstuff in question and, unless mentioned, should not be used. Permission to use other additives (except vinegar, salt, lactic acid and natural wood smoke or smoke condensates) should be obtained from: Ministerie voor Landbouw en Visse, Bezuidenhoutseweg 73, 2594 AC The Hague, The Netherlands.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit	
			Individual (mg/kg)	Combined (mg/kg)
Antioxidants				
General: Antioxidants are not permitted in fishery products				
Colours				
General: Artificial colouring substances are not permitted generally in fish products (safron and sandalwood are considered to be natural products)				
Only the following products may be coloured:				
Fish – paste, sausage	Amaranth	E123	No quantitative limits established	
Roe	Annatto	E160(b)		
Shrimps – canned or bottled	Anthocyanins	E163		
Salmon – smoked substitute	Beetroot red	E162		
Coated products with breadcrumbs	Black PN	E151		
	Brilliant blue FCF	133		
	Calcium carbonate (surface use only)	E170		
	Canthaxanthin	E161(g)		
	β-carotene	E160(a)		
	Carotenoids	E160,E161		
	β-apo-8'-carotenal and ethyl ester of ~	E160(e),E160(f)		
	Carbon black	E153		
	Carmine	E120		
	Carmisine	E122		
	Chlorophyll	E140		
	Copper chlorophyll	E141		
	Curcumin	E100		
	Erythrosine BS	E127		
	Green S	E142		
	Indigo carmine	E132		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Paprika	–		
	Patent blue V	E131		
	Ponceau 4R	E124		
	Quinoline yellow	E104		
	Riboflavin	E101		
	Sunset yellow FCF	E110		
	Tartazine	E102		
	Xanthophylls	E161		
Emulsifiers and Stabilisers				
General: Only the following may contain added emulsifiers and stabilisers:				
Fish – filleted, breaded, frozen	Polyphosphates	E450(c),540	5000	
Preservatives				
General: Preservatives other than vinegar, salt, lactic acid and natural wood smoke (and condensates) are permitted only for the following products:				
Fish – processed (except heat preserved products) and surrounding liquid	Benzoic acid	E210	5000	5000
	Benzoate, calcium-, potassium-, sodium-	E213,E212,E211		
	Sorbic acid	E200	5000	
	Sorbate, calcium-, potassium-, sodium-	E203,E202,E201		
Fish – semi-preserved Fish products with pH greater than 4.5	Benzoic acid	E210	5000	5000
	Benzoate, calcium-, potassium-, sodium-	E213,E212,E211		
	Sorbic acid	E200	5000	
	Sorbate, calcium-, potassium-, sodium-	E203,E202,E201		
	Hexamethylenetetramine	E239	500	
Caviar and other unsmoked fish roes	Benzoic acid	E210	5000	5000
	Benzoate, calcium-, potassium-, sodium-	E213,E212,E211		
	Sorbic acid	E200	5000	
	Sorbate, calcium-, potassium-, sodium-	E203,E202,E201		
	Hexamethylenetetramine	E239	1000	
Shrimps – peeled	Benzoic acid	E210	10×10^3	10×10^3
	Benzoate, calcium-, potassium-, sodium-	E213,E212,E211		
	Sorbic acid	E200	10×10^3	
	Sorbate, calcium-, potassium-, sodium-	E203,E202,E201		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Flavour Enhancing Agents				
General: Flavour enhancing agents are not permitted in fishery products apart from the following artificial sweetening agent which is permitted in all foods:				
	Saccharin		200	

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues				
General: Limits on pesticide residues in food do not apply to most fish products. Where they do apply, no residues are permitted other than those specified below: Note, whether listed or not, products will be rejected where any residues considered to be a hazard to public health are found.				
All products	Mirex (perchlordecone	2385-85-5	0.01	
Squid Frogs legs	Aldrin	309-00-2	0.2	
	(dieldrin)	60-57-1	0.2	
	Anthraquinone	84-65-1	0.05	
	Azamethiphos	35575-96-3	0.02	
	Azolamide	-	0.05	
	Barban	101-27-9	0.02	
	Bendiocarb and conversion product	22781-23-3	0.05	0.5
	2,2-dimethyl, 1,3-benzodioxol-4-ol	-	expressed as bendiocarb	
	Benodanil	15310-01-7	0.05	
	Benzthiazuron	1929-88-0	0.05	
	Benzyladenine (benzylaminopurine)	1214-39-7	0.01	
	Bioresmethrin	28434-01-7	0.1	
	Bromochloropropene	3737-00-6	0.05	
	Carbendazim	10605-21-7	0.1	
	Carbon disulphide	75-15-0	0.05	
	Chloramine-T	127-65-1	}	
	p.toluenesulphonsodiochloramide	-	} 1.0 expressed as	1.0
	p.toluenesulphonamide	70-55-3	} p.toluene-sulphonamide	
	Chlordecone	143-50-0	0.05	

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Chlordimeform and conversion product 2-methyl-4-chloraniline	6164-98-3	0.02 expressed as chlordimeform	0.02
	Chlorfenprop-methyl	14437-17-3	0.05	
	Chloropicrin	76-06-2	0.01	
	Chlorthiophos and conversion products chlorothiophos-sulphoxide and -sulfone	60238-56-4	0.05 expressed as chlorthiophos-	0.05
	Chloralhydrate, trichloracetaldehyde, chloroform	302-17-0	1.0 expressed as chloralhydrate	
	Cresols (3 isomers: 95-48-7, 108-39-4, 106-44-5)		0.1 expressed as cresol	
	Cycloate	1134-23-2	0.05	
	Cyfluthrin	68359-37-5	0.05	
	Cyprofuram	69581-33-5	0.05	
	Dalapon	127-20-8	0.05	
	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane and conversion products	50-29-3	1.0	1.0
	DDD (TDE) 2,2-Bis(4-chlorophenyl)-1,1-dichloroethane	72-54-8		
	DDE 2,2,-Bis(4-chlorophenyl)-1,1-dichloroethylene	72-55-9		
	Demeton (8065-48-3) (usually a mixture of 2 isomers):	298-03-3	0.05 expressed as demeton sulphone	0.05
	Demeton-sulphoxide and -sulphone sulphone	126-75-0		
	N,N-diallyl-dichloracetamide (dichlormid)	37764-25-3	0.05	
	1,2-dibromo-3-chloropropane	96-12-8	0.02	
	1,2-dibromomethane (ethylene dibromide)	106-93-4	0.01	
	Dichlofethion	97-17-6	0.02	
	1,2-dichloroethane	107-06-2	0.01	
	Dienochlor	2227-17-0	0.01	
	Dikegulac-sodium	52508-35-7	0.1	
	Dimefox	115-26-4	0.02	
	Dinobuton	973-21-7	0.05	
	Disulfoton and conversion products: Disulfoton-sulphoxide and -sulphone	298-04-4	0.02 expressed as disulfoton-sulphone	
	Dodemorf	1593-77-7	0.05 expressed as total of cis- and trans-dodemorf	
	Endothal-sodium (acid)	145-73-3	0.1	
	Ethylene oxide (Ethenoxide, ETO)	75-21-8	0.1	
	Ethidimuron	30043-49-3	0.05	
	Ethion	563-12-2	0.02	
	Fenaminosulf	140-56-7	0.1	
	Fenoprop	93-72-1	0.05	
	Fluometuron and conversion product: 3-trifluormethylanaline (3-aminobenzotrifluoride)	2164-17-2 98-16-8	0.05 expressed as fluometuron	
	Formaldehyde	50-00-0	1	
	Formetanate	23422-53-9	0.05	
	Furalaxyl	57646-30-7	0.05	
	Furmecyclox	60568-05-0	0.05	
	Hexazinone	51235-04-2	0.1	
	Hydrogen peroxide	7722-84-1	1.0	
	Hymexazol	10004-44-1	0.05	
	Mefluidide	53780-34-0	0.01	
	Menazon	78-57-9	0.02	
	Methoprene	40596-69-8	0.05	

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Methoprotryne	841-06-5	0.02	
	Metolachlor	51218-45-2	0.05	
	Monocrotophos	6923-22-4	0.02	
	Naled	300-76-5	0.02	
	Nicotine	54-11-5	0.05	
	Oxydemeton-methyl and conversion product demeton-S-methylsulphone	301-12-2	0.05 expressed as demeton-S-methylsulphone	
	Permethrin	52645-53-1	0.05 expressed as total of cis- and trans-permethrin	
	Piproctanyl-bromide and conversion product Tetrahydro-geranyl-piperidine	56717-11-4	0.05 expressed as piproctanyl-bromide	
	Pirimiphos-ethyl	23505-41-1	0.02	
	Pirimifos-methyl	29232-93-7	0.05	
	Phenothrin	26002-80-2	0.1 expressed as total of cis- and transphenothrin	
	Phorate and conversion product Phorate-sulfoxide	298-02-2	0.05 expressed as phorate-sulphone	
	Propiconazole (proconazole)	60207-90-1	0.05	
	Propargite	2312-35-8	0.05	
	Prothoate	2275-18-5	0.05	
	Pyridate and conversion product 3-fenyl-4-hydroxy-b-chlor-pyradazine	55512-33-9	0.1 expressed as pyridate	
	Quaternary ammonium compounds	–	0.5 expressed as cetyltri-methyl-ammonium-chloride	
	Quinalphos	13593-03-8	0.02	
	Rotenone	83-79-4	0.05	
	Streptomycin	57-92-1	0.5	
	2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	93-76-5	0.05	
	2,3,6-TBA (2,3,6-trichlorabenzoic acid)	50-31-7	0.05	
	TCA (sodium trichloroacetate)	650-51-1	0.05	
	Tecnazene	117-18-0	0.01	
	Temephos and conversion product	3383-96-8	0.02 expressed as total of temephos and -sulphoxide	
	Temephos-sulphoxide			
	TEPP (tetraethylpyrophosphate)	107-49-3	0.01	
	Terbufos	13071-79-9	0.01	
	Tetrachlorfenol	4901-51-3	0.05	
	Thiabendazol		0.1	
	Triamifos		0.02	
	Trichlorophenol 15950-66-0. 609-19-8	95-95-4	0.02 expressed as total of all trichlorophenols	
	933-78-8. 933-75-5	88-06-2		
	Trichloroisocyanuric acid and conversion product, isocyanuric acid	87-90-1	1 expressed as isocyanuric acid	
	Trifenmorph and conversion product Triphenyl-carbinol	1420-06-0	0.01 expressed as trifenmorph	
	Vernolate	1929-77-7	0.05	

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Contaminants			
i) Organochlorine PCBs (Polychlorinated biphenyls)			

PCB component (IUPAC No)	Limits PCB mg/kg 28	52	101	118	138	153	180
Fish liver	1.5	0.6	1.2	1.2	1.5	1.5	2.0
Silver eel	0.5	0.2	0.4	0.4	0.5	0.5	0.6
Mackerel, herring							
Herring-like species	0.3	0.12	0.24	0.24	0.3	0.3	0.36
Other fish species	0.1	0.04	0.08	0.08	0.1	0.1	0.12

ii) Heavy metals

	Limits mg/kg Cadmium	Lead	Mercury
Mackerel, herring and sprat (and products)	0.05	2.0	1.0
Other fish species (and products)	0.05	0.5	1.0
Crustaceans (and products)	0.05	0.5	1.0
Oysters and mussels (and products)	0.7	2.0	1.0
Other molluscs (and products)	1.0	2.0	1.0

Imported oysters and mussels must be accompanied by certificates from a competent authority declaring that the products meet the appropriate requirements.

iii) Other trace metals (migration products from metal and glass packaging materials)

All fish and fish products		
i) in metal packages	Copper	60
	Nickel	6
	Chrome	6
	Cadmium	0.06
	Lead	0.06
	Lead in canned products	0.05
	Arsenic	0.06
	Antimony	0.30
	Bismuth	6
	Cobalt	0.60

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Manganese	18	
	Melamines	36	
	Zirconium	0.30	
	Vanadium	6	
ii) in glass packages	Antimony	0.03	
	Arsenic	0.06	
	Barium	1.20	
	Borium	6	
	Cadmium	0.06	
	Cesium	6	
	Chrome	6	
	Cobalt	0.60	
	Fluorine	6	
	Lithium	6	
	Lead	0.60	
	Manganese	18	
	Nickel	6	
	Rubidium	6	
	Zirconium	0.30	
Natural Toxins			
Clams, Mussels, Oysters } Fresh, frozen, canned	PSP (Paralytic shellfish toxin)	0.8	
Anchovy	Histamine	400	
Other fish	Histamine	200	
	Fat soluble dinoflagellate biotoxins	Absent	
	Water soluble dinoflagellate biotoxins	0.4	
Radionuclides			
General:	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
Herring and products of ~	Nematodes (live)	Must be absent
Oysters	Escherichia coli	3/100 ml meat and liquor
Mussels	Escherichia coli	300/100 ml meat and liquor
Oysters and mussels	Escherichia coli	50/1000 ml of water from which they were harvested (90% of cases)
		150/1000 ml (allowed in upto 10% provided oyster and liquor meet their requirements)
	Salmonella spp	Absent in 25 g of meat
	Dinoflagellates/phytoplankton ratio	Less than 15 per 100 in water from which they were harvested
	Dinoflagellates causing toxin or cyst production	Absent from harvest environment
Imported oysters and mussels must be accompanied by certificates from a competent authority declaring that the products meet the appropriate requirements.		
Shrimps - boiled, shelled not for sale directly to consumer	Staphyloccocus aureus	500/g in at least 2 out of 5 samples; 5000/g in all 5 samples
	Salmonella spp	Absent from 25 g: 5 samples
	Other pathogenic organisms	Absent from 1 g: 5 samples
Shrimps - boiled, shelled for sale directly to consumer	Staphyloccocus aureus	5000/g: 5 samples
	Salmonella spp	Absent in 25 g: 5 samples
	Other pathogenic organisms	Absent from 1g: 5 samples

LABELLING

General - As per EEC directive (see Table 3a).

Additional requirements - Language - must be in Dutch.

production lot may be given in code.

Shrimp - Imports allowed only from exporters registered with Benelux Health Authorities.

Each shipment must be accompanied by a health certificate issued by respective national agency.

The Certificate must be in accordance with the Codex Alimentarius Recommended International Code of Practice for Shrimps or Prawns, and of the Recommended International Code of Practice on the General Principles of Food Hygiene.

- Additives - antioxidants, colours, emulsifiers, stabilisers and preservatives must be labelled by the category names: antioxidant, colorant, emulgator, stabilisator and conserveermiddel respectively. If desired, the category names may be accompanied by either the customary names or the EEC serial numbers of the individual additives.

PORTUGAL

PERMITTED ADDITIVES

General: There is a list of additives which are permitted for use in fish products. Authorisation to use any additive not listed must be obtained by applying, in writing, with technical details of the need for the additive to: Ministério de Agricultura, Pescas e Alimentacão, Instituto de Qualidade Alimentar, R Alexandre Herculano 6-4°, 1100 Lisboa.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
General: Only the following may contain added antioxidants:				
Fish – fillets, frozen	Citric acid	E330	GMP	
	Citrate, potassium~, sodium~	E332,E331		
Fish – minced, frozen	Ascorbic acid	E300	300 expressed as the acid	
	Ascorbate, sodium~	E301		
	Citric acid	E330	GMP	
	Citrate, potassium~, sodium~	E332,E331		
Crustaceans	Ascorbic acid	E300	GMP	
	Ascorbate, sodium~	E301		
Colours				
General: Only the following may contain added colouring:				
Shrimp – canned	Amaranth	E123	GMP	
	α-,β-,γ-Carotene	E160a		
	Tartrazine	E102		
Fish – soup	Caramel	E150	GMP	
Fish – cooked, frozen	Curcumin	E100	GMP	
	Cochineal	E120		
	α-,β-,γ-Carotene	E160(a)		
	Bixin	E160(b)		
Emulsifiers and Stabilisers				
Fish products – frozen	Diphosphate, tetrapotassium~, trisodium~	E450a,E450b	5000 Expressed as	5000 P_2O_5
	Orthophosphate, potassium~, sodium~	E340,E339		
	Triphosphate, pentapotassium~, pentasodium~	E450b,E450b		
	Polyphosphate, sodium~	E450c		

Additives - emulsifiers
preservatives

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish - minced, frozen coatings for frozen products sauces for canned products (except fish in oil)	Acetylated distarch, ~adipate, ~phosphate	-,-	GMP	
	Phosphate, monostarch~, distarch~	-,-		
	Starch, acid treated~, alkali treated~	-,-		
	Starch, bleached~, oxidised~	-,-		
Fish - fillets, frozen minced, frozen	Alginic acid	E400	5000	
	Alginate, calcium~, potassium~, sodium~	E404,E402,E401		
	Agar	E406		
	Carrageenan	E407		
	Cellulose, methyl~	E461		
	Gum, carob~, guar~, xanthan~	E410,E412,E415		
	Pectin, amidated pectin	E440a,E440b		
Fish - coatings for frozen products	Lecithins	E322	5000	5000
	Mono- and di-glycerides of fatty acids	E471		
	Alginic acid	E400	5000	
	Alginate, calcium~, potassium~, sodium~	E404,E402,E401		
	Agar	E406		
	Carrageenan	E407		
	Cellulose, hydroxypropyl~, hydroxypropylmethyl~, methyl~	E463,E464,E465		
	Gum, carob~, guar~, xanthan~	E410,E412,E415		
	Pectin, amidated pectin	E440a,E440b		
	Tragacanth	E413		
	Orthophosphate, calcium~	E341	GMP	
	Bicarbonate, ammonium~, potassium~, sodium~	E503,E501,E500		
	Carbonate, ammonium~	E503		
Fish - sauces for canned products (except fish in oil)	Alginic acid	E400	GMP	
	Alginate, calcium~, potassium~, sodium~	E404,E402,E401		
	Agar	E406		
	Carrageenan	E407		
	Gum, carob~, guar~, xanthan~	E440,E412,E415		
	Pectin, amidated pectin	E440a,E440b		
	Tragacanth	E413		
<u>Preservatives</u>				
Fish - salted, dried	Sorbic acid	E200	200	200
	Sorbate, potassium~, sodium~	E202,E201	expressed as sorbic acid	
	Metabisulphite, sodium~	E223	100	
Crustacean shellfish - fresh, chilled or frozen	Benzoic acid	E210	1000	1000
	Benzoate, sodium~	E211		
	para-Hydroxybenzoate, methyl~	E218		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Crustacean shellfish – raw, fresh, chilled or frozen	Bisulphite, sodium~ Metabisulphite, potassium~, sodium~ Sulphite, sodium~	E222 E224,E223 E221	100 Expressed as SO_2 in the edible portion	100
Crustacean shellfish – cooked, fresh chilled or frozen	Bisulphite, sodium~ Metabisulphite, potassium~, sodium~ Sulphite, sodium~	E222 E224,E223 E221	30 Expressed as SO_2 in the edible portion	30
Semi-preserves	Benzoic acid Benzoate, potassium~, sodium~	E210 E212,E211	3000 Expressed as benzoic acid	3000
	para-Hydroxybenzoate, ethyl~, methyl~, propyl~ – and their sodium salts	E214,E218,E216 E215,E219,E217	300 Expressed as parahydroxybenzoic acid	300
Caviar	Hexamethylenetetramine	E239	1000	
Flavour Enhancing Agents				
General: Only the following flavour enhancing agent is permitted:				
General – coatings for frozen products Shellfish – canned	Glutamate, monosodium~	621	GMP	
Other Permitted Additives				
	– Sequestrants			
Crustacean shellfish – fresh, chilled or frozen	EDTA (ethylenediaminetetraacetate, calcium disodium salt)	385	75	
– canned	EDTA (ethylenediaminetetraacetate, calcium disodium salt)	385	75	
	– Acidity regulators			
Crustacean shellfish – frozen	Citric acid	E330	GMP	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Shrimp - frozen Crustacean shellfish - canned Tuna (and similar species) - canned	Diphosphate, tetrapotassium~, tetrasodium~ Triphosphate, pentapotassium~, pentasodium~	E450a,E450a E450b,E450b	5000 Expressed as P_2O_5	5000
Fish and shellfish - coatings on frozen products	Lactic acid Citric acid Citrate, potassium~, sodium~	E270 E330 E332,E331	1000 1000 Expressed as citric acid	
Fish and shellfish - canned - semi-preserves	Acetic acid Citric acid Lactic acid	E260 E330 E270	GMP	
	- Smoke			
Fish - smoked	Smoke from suitable, untreated wood Aqueous solutions of smoke constituents	- -	GMP	

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues	No limits established		
Contaminants			
i) Organochlorine compounds	No limits established		
ii) Heavy metals			
Fish	Mercury	1.0 (total mercury)	
iii) Other trace elements	No limits established		

Hazards - biotoxins
Radionuclides
Microbiological Standards
Labelling

Fish Product	Hazardous Substance	Specified Limit	
		Individual (mg/kg)	Combined (mg/kg)
Biotoxins			
Molluscs (bivalves)	DSP (Diarhetic shellfish toxin)	Absent from 100 g (of edible part)	
	PSP (Paralytic shellfish toxin)	0.8 (in edible part)	
Radionuclides			
All fish and shellfish products	Cs 134 (Caesium 134)	600 Bq/kg	
	Cs 137 (Caesium 137)	600 Bq/kg	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
General		No limits established

LABELLING

General - As per EEC directive (see Table 3a)

Additional requirements - Language - must be Portuguese.

SPAIN

PERMITTED ADDITIVES

General: There is a 'positive list' of food additives permitted for use in fishery products. The list is regularly updated. Any additive (or amount) which is not in the list is forbidden except where specifically permitted for particular products. Food manufacturers must register with the authorities all foodstuffs imported in Spain and special permission must be obtained for additives, macromolecular packaging materials and dietary foods. A Register is also kept of food industries and establishments; the final decision regarding the acceptability of a product rests with the authorities regardless of regulations which act as a guide only. Further information from: Servico de Sanidad Exterior, Dirección General de Salud Alimentaria y Protección de los Consumidores, Ministerio de Sanidad y Consumo, Paseo del Prado 18–20, Madrid 28014.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
Fish – preserves, semi-preserves	Ascorbic acid	E300	GMP	
	BHA (Butylated hydroxyanisole)	E320	100 (based on fat content)	
	BHT (Butylated hydroxytoluene)	E321	100 (based on fat content)	
Fish Cephalopods – frozen, minced, sausages, pressed block form	Ascorbic acid	E300	0.5 (expressed as ascorbic acid)	0.5 (expressed as ascorbic acid)
	Ascorbate, sodium~	E301	0.5 (expressed as ascorbic acid)	0.5 (expressed as ascorbic acid)
	Citric acid	E330	5000	
Crustacean shellfish – fresh or frozen, raw	Sulphite, sodium~, sodium hydrogen~	E221,E222	100 (expressed as SO_2)	
	Metabisulphite, potassium	E224	100 (expressed as SO_2)	
Crustacean shellfish – fresh or frozen, cooked	Sulphite, sodium~, sodium hydrogen~	E221,E222	30 (expressed as SO_2)	
	Metabisulphite, potassium	E224	30 (expressed as SO_2)	
Cephalopods – frozen, raw	Metabisulphite, sodium~	E223	100 (expressed as SO_2)	
Cephalopods – frozen, cooked	Metabisulphite, sodium~	E223	30 (expressed as SO_2)	
Colours				
Fish – sterilized preserves Crustaceans – cooked	Anthocyanins	E163	GMP	
	Beetroot red	E162	GMP	
	Carotenoids	E160,E161	GMP	
	Curcumin	E100	GMP	
	Lactoflavin	E101	GMP	
	Xanthophylls	E161	GMP	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Fish roe – semi-preserved	Black PN	E151	GMP	
	Ponceau 4R	E124		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
Fish – smoked (except salmon)	Ponceau 4R	E124	GMP	
	Sunset yellow FCF	E110		
	Tartrazine	E102		
Emulsifiers and Stabilisers				
Fish, Crustacean shellfish, Cephalopods – frozen, chopped, minced, in casings (eg sausages) and pressed block form	Ethylenediamine tetra-acetate, calcium disodium~	385	75	
Fish, Shellfish – preserves and semi-preserves	Ethylenediamine tetra acetate, calcium disodium~	385	75	
Crustacean shellfish – fresh, frozen	Diphosphate, tetra sodium~, tetra potassium~	E405(a)	5000	5000 expressed as P_2O_5
Cephalopods – whole or portioned, frozen	Hexametaphosphate, sodium~		5000 expressed as P_2O_5	
Fish, Cephalopods – chopped, frozen	Caseinate, sodium~		5000	
Fish roe – semi-preserved	Gum tragacanth	E413	20×10^3	
Fish, Shellfish – preserves and semi-preserves	Alginic acid	E400	20×10^3	20×10^3
	Alginate, calcium~, potassium~, sodium~	E404,E402,E401		
	Agar	E406		
	Carrageenan	E407		
	Gum, locust bean~, guar~, xanthan~	E410,E412,E415		
Fish, Cephalopod – covering medium of preserves and semi-preserves, and in frozen, chopped, minced forms and in casings (eg sausages and pressed block form	Tripolyphosphate, potassium~, sodium~	E450(b)	5000	5000
	Polyphosphates, sodium~	E450(c)		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg) *	Specified Limit Combined (mg/kg)
Preservatives				
Crustacean, Shellfish } fresh, frozen	Benzoic acid	E210	1000	1000
	Benzoate, sodium~, methyl p-hydroxy~	E218,E211	in final product	
Flavour Enhancing Agents				
Fish – preserves and semi-preserves	Glutamic acid	620	2000	
	Glutamate, monosodium~	621		
	Guanylic acid	–	500	500
	Guanylate, potassium~, sodium~	–,627		
	Inosinic acid	–		
	Inosinate, potassium~, sodium~	–,631		
	Aromas – natural or artificial	–	GMP	
	Oleoresin extracts (herbs/spices)	–		
Other Permitted Additives				
	– Acidulants			
Fish, Shellfish } preserves, semi-preserves, fresh or frozen	Lactic acid	E270	5000 – in final product	
	Citric acid	E330		
Fish – preserves, semi-preserves	Acetic acid of natural origin	–	GMP	
Crustacean shellfish – fresh, frozen	Lactate, calcium~	E327	GMP	
	Orthophosphoric (phosphoric) acid	E338		
Cephalopods – frozen	Orthophosphoric (phosphoric) acid	E338	850	
	– Humectants			
Crustacean shellfish – fresh, frozen	Magensium, ~carbonate, ~oxide	–	GMP	
	– Miscellaneous			
Fish – shellfish – chopped, frozen	Chloride, calcium~	509	3000	
	Carbonate, sodium hydrogen~ (bicarbonate)	500		
	Diphosphate, sodium~	E450	5000 expressed as P_2O_5	

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	Specified Limit	
		Individual (mg/kg)	Combined (mg/kg)
Pesticide Residues			
General:	No limits established		
Contaminants			
i) Organochlorine	No limits established		
ii) Heavy metals			
Fish and seafood of at least 5 kg weight } fresh, chilled, frozen	All heavy metals	0.5	
Any canned or processed fish and fishery products			
iii) Other trace elements	No limits established		
Natural Toxins			
Clams, Mussels, Oysters } Fresh, frozen, canned	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
	Cs 134 (Caesium 134)	600 Bq/kg (Bq/L)	
	Cs 137 (Caesium 137)	600 Bq/kg (Bq/L)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
Fresh fish	Aerobic total viable count	10^6
Crustaceans	Coliforms	250
Molluscs	Enterococci	1,000
Marine or fresh water mammals	Escherichia coli (type I)	Absent in 1 g
	Staphylococci (coagulase + DNA-ase + ve)	Absent in 5 g
	Salmonella spp	Absent in 25 g
Molluscs - preserved	Pathogens	Absent
	Microbial growth in 28 days at 31(±1)°C and 10 days at 44°C	Absent
	Bacillaceae spores (non-pathogenic species)	10 spores/unspecified quantity
	Clostridium botulinum toxin	Absent
Mussels - cooked and frozen	Aerobic mesophiles	10^4
	Total Enterobacteriaceae	10
	Escherichia coli	Absent in 1 g
	Salmonella spp	Absent in 25 g
	Shigella spp	Absent in 25 g
	Enterotoxigenic staphylococci	100
Bivalve shellfish - cleaned	Aerobes	10^5/ml
	Escherichia coli	500/litre
	Salmonella spp	Absent in 25 ml
	Streptococci (Lancefield group D)	100
	Pathogens	None

LABELLING

General - as per EEC directive (see table 3a).

Additional requirements - Language - must be in Spanish.

- Production lot is not necessary for some products (molluscs purified alive and products which are packed in Spain).

- The manufacturer's name and address or sanitary record number must be stated with the phrase 'manufactured by ...' for products which are sold under the name of a distributor.

- Spanish reference numbers may be used for additives if no EEC serial number has been assigned.

UNITED KINGDOM

PERMITTED ADDITIVES

General: There are specific regulations limiting the use of some classes of additives. Also, there are regulations governing the use of miscellaneous additives permitted in food, all of which are permitted in fish products. In the absence of a specific regulation, in order to prevent the sale of foods which are deemed to be injurious to health, prosecutions can be brought to court and non-statutory limits (such as internationally accepted recommendations) can be accepted as evidence. Inquiries should be directed to: Ministry of Agriculture, Fisheries and Food, Food Standards Division, Food Safety Directorate, Ergon House, 17 Smith Square, London SW1P 3HX. Telephone: 01-238-3000.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit	
			Individual (mg/kg)	Combined (mg/kg)
Antioxidants				
General: Restricted antioxidants are not permitted in fish and fishery products				
Generally permitted in fish products:	Ascorbic acid	E300	No quantitative limits established	
	Ascorbate, calcium-, sodium-	E302,E301		
	Ascorbyl palmitate	E304		
	Tocopherols, synthetic alpha- delta- and gamma-, extracts of natural origin rich in-	E306		
Colours				
Fish - raw or unprocessed	May not be coloured			
Fish - products	Amaranth	E123	No quantitative limits established	
	Annatto	E160(b)		
	Anthocyanins	E163		
	Beetroot red	E162		
	Black PN	E151		
	Brilliant blue FCF	133		
	Brown FK	154		
	Calcium carbonate	E170		
	Caramel	E150		
	Carbon black	E153		
	Carmine	E120		
	Carmoisine	E122		
	β-carotene	E160(a)		
	Carotenoids	E160,E161		
	β-apo-8'carotenal and ethyl ester of-	E160(e),E160(f)		
	Chlorophyll	E140		
	Copper chlorophyll	E141		
	Chocolate brown HT	155		
	Cochineal (carminic acid)	E120		
	Curcumin	E100		
	Erythrosine BS	E127		
	Green S	E142		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit	
			Individual (mg/kg)	Combined (mg/kg)
	Indigo carmine	E132		
	Iron, ~hydroxides, ~oxides	E172		
	Lactoflavin	E101		
	Patent blue V	E131		
	Ponceau 4R	E124		
	Quinoline yellow	E104		
	Red 2G	128		
	Riboflavin 5'-phosphate	101(a)		
	Sunset yellow FCF	E110		
	Tartrazine	E102		
	Titanium dioxide	E171		
	Xanthophylls: canthaxanthin, cryptoxanthin, flavoxanthin, lutein, rhodoxanthin, rubixanthin, violaxanthin	E161		
Emulsifiers and Stabilisers				
Fish products	Agar	E406	No quantitative limits established	
	Alginic acid	E400		
	Alginate, ammonium~, calcium~, potassium~ propane-1,2-diol~ sodium~	E403,E404,E402 E405,E401		
	Ammonium phosphatides (emulsifier YN)	442		
	Carrageenan	E407		
	Cellulose, carboxymethyl~, ethylmethyl~, hydroxypropyl~, hydroxypropyl-methyl~, methyl~, microcrystalline~,	E466,E465,E463 E464,E461,E460i		
	Dioctyl sodium sulphosuccinate	-		
	Fatty acids, mono- and di-glycerides of~	E471		
	acetic acid esters of mono and diglycerides of~	E472(a)		
	citric acid esters of mono and diglycerides of~	E472(c)		
	lactic acid esters of mono and diglycerides of~	E472(b)		
	mixed acetic/tartaric acid esters of mono- and diglycerides of~	E472(a)+E472(d)		
	mono and diacetyltartaric acid esters of mono- and diglycerides of~	E472(e)		
	polyglycerol esters of~	E475		
	polyglycerol esters of polycondensed fatty acids of castor oil	E475		
	propane-1,2-diol esters of~	E477		
	sucrose esters of~	E473		
	Gum, guar~, karaya (sterculia)~, locust bean~, xanthan~	E412,E416,E410, E415		
	Gum arabic (acacia), gum traganth	E414,E413		
	Lactylated fatty acid esters of glycerol and propane-1,2-diol	478		
	Lecithins	E322		
	Pectin, amidated pectin, pectin extract	E440(a),E440(b)		
	Polyoxyethylene (8) stearate	430		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Polyoxyethylene (40) stearate	431		
	Polyexyethylene (20) sorbitan monostearate (polysorbate 60)	435		
	Polyoxyethylene (20) sorbitan tristearate (polysorbate 65)	436		
	Polyoxyethylene (20) sorbitan monopalmitate (poysorbate 40)	434		
	Polyoxyethylene (20) sorbitan monolaurate (polysorbate 20)	432		
	Polyoxyethylene (20) sorbitan mono-oleate (polysorbate 80)	433		
	Sorbitan, ~monolaurate, ~mono-oleate, ~monopalmitate, ~monostearate, ~tristearate	493,494,495 491,492		
	Stearoyl-2-lactylate, calcium~, sodium~	E482,E481		
	Stearyl tartrate	E483		
	Sucroglycerides	E474		
Certain other substances are permitted for use even though they are not classified as emulsifiers under UK law, eg some citrates, tartrates, starches and modified starches as wells as ammonium, calcium, potassium and sodium phosphates and polyphosphates.				
Preservatives				
General: Preservatives are not permitted for use in most fish products. Only the following may contain restricted preservatives				
Crabmeat – canned	SO_2 (Sulphur dioxide)	E220	30	Sum of proportions of each substance must not exceed 100%
	Sulphite, calcium~, calcium hydrogen~	E226,E227		
	Sulphite, sodium~, sodium hydrogen~	E221,E222		
	Metabisulphite, potassium~, sodium~	E224,E223		
Herring, Mackerel – Marinated, where pH exceeds 4.5	Benzoic acid	E210	1000	
	p-Hydroxybenzoate, ethyl~, methyl~, propyl~	E214,E218,E216	1000	
	Hexamine	E239	50	
Herring, Mackerel – Marinated, where pH does not exceed 4.5	Benzoic acid	E210	1000	
	p-Hydroxybenzoate, ethyl~, methyl~, propyl~	E214,E218,E216	1000	
Prawns, Shrimps, Scampi	SO_2 (sulphur dioxide) (in edible part)	E220	200	
	Sulphite, calcium~, calcium hydrogen~	E226,E227	200	
	Sulphite, sodium~, sodium hydrogen~	E221,E222	200	
	Metabisulphite, potassium~, sodium~	E224,E223	200	
Fish, Shellfish – products	Certain other substances are permitted for use even though they are not classified as preservatives under UK law eg		GMP	The quantity of preservative carried over is in proportion to the quantity of the ingredient used
	(i) carbon dioxide (packaging gas)	E290		
	(ii) acidulants, acetic and lactic acids	E260,E270		
	(iii) these and other permitted preservatives – carry over is allowed in compound foods.			

Fish Product	Permitted Additive	EEC 'E Number'	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Flavour Enhancing Agents				
All fish products	Glutamate, sodium hydrogen-		No quantitative limits established	
	Guanosine 5′ disodium phosphate (sodium guanylate)	627		
	Inosine 5′ disodium phosphate (sodium inosinate)	631		
	Sodium 5′ ribonucleotide	635		
Miscellaneous Additives				
General: The miscellaneous additives in foods regulations mention over 150 substances of which some have been mentioned in the summary tables but all are permitted in food products generally, including fish. Two such additives of particular relevance to fish processing and which are permitted for use in specific circumstances are given below:				
Fish, Shellfish } canned	Calcium disodium ethylenediamine-tetra-acetate (sequestrate)	385	GMP	
Fish, Shellfish } frozen products	Dichlorodifluoromethane (liquid freezant)	-	100	(determined when the food is fully thawed at and to 20°C)

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues			
General:	No limits established		

Fish Product	Hazardous Substance	Specified Limit	
		Individual (mg/kg)	Combined (mg/kg)
Contaminants			
i) Organochlorine	No limits established		
ii) Heavy metals			
Fish – except dried fish & shellfish	Lead	2.0	
Fish – dried	Lead	5.0	
Shellfish	Lead	10.0	
iii) Other trace elements			
Fish and fish products	Arsenic (except any product where arsenic in proportions exceeding 1 ppm is naturally present)	1.0	
Natural Toxins			
Clams, Mussels, Oysters (Fresh, frozen, canned)	PSP (Paralytic shellfish toxin)	0.8	
Radionuclides			
General:	No limits established		

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit Number of viable organisms per gram of product
Prawns - imported, frozen, cooked	Aerobic total viable count (TVC)	10^5 - release unconditionally 10^6 - release with a warning to use immediately on thawing
	Salmonella spp.	None in 25 g
	Staphyloccocus aureus	1,000
	Escherichia coli	10

LABELLING

General - As per EEC directive - see Table 3a

Additional requirements - Language - must be English

Country of origin - must be declared

UNITED STATES OF AMERICA

PERMITTED ADDITIVES

General: There is a list of additives which are considered to be generally recognised as safe (GRAS) and may be used unless there is a restriction in the list or there is a standard of identity which does not provide for its use. There are standards of identity for salmon (canned), oysters, canned wet pack shrimp, frozen raw breaded shrimp, frozen raw lightly breaded shrimp and tuna (canned); all other products are non-standardised. Requests for exemption from FDA regulations may be made to the Commissioner of Food and Drugs by means of a petition which must be submitted in a specific form dependant upon the regulation concerned. Further enquiries to: Food and Drug Administration, Department of Health and Human Services, 200 C St, SW, Washington, DC 20204, USA.

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Antioxidants				
General: Non-standardised	Tocopherols, tocopherol acetate	E306/7/8/9	GMP	200 (for total amount of antioxidant in fat)
	Ascorbic acid, ascorbyl palmitate	E300,E304		
	Ascorbate, calcium-, sodium-	E302,E301		
	BHA (butylated hydroxyanisole)	E320		
	BHT (butylated hydroxytoluene)	E321		
	Dilaurylthiodipropionic acid	–		
	Erythorbic acid	–		
	4-hydroxymethyl -2,6 ditertiary-butylphenol	–		
	Propyl gallate	E310		
	Tertiary butylhydroquinone	–		
	Thiodipropionic acid	–		
	Trihydroxybutyrophenone	–		
Shrimp – frozen, raw, breaded	Ascorbic acid, ascorbyl palmitate	E300,E304	GMP	200 (for total amount of antioxidant in fat)
	Ascorbate, calcium-, sodium-	E302,E301		
	BHA (Butylated hydroxyanisole)	E320		
	BHT (Butylated hydroxytoluene)	E321		
	Erythrobic acid	–		
	Tocopherols	E306/7/8/9		
Colouring Substances				
Imports need US name of any added colour to be stated in the consular declaration by the shippers.				
General: Non-standardised				
Synthetic colourings subject to certification by the FDA	Allura red AC and aluminium and calcium lakes FD&C No Red 40	129	No limit specified	
	Fast green FCF (Green 3)			
	Indigo carmine (Blue 2)	E132		
	Tartrazine (Yellow 5)	E102		
	Erythrosine (Red 3)	E127		
	Brilliant blue (Blue 1)	133		

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Provisionally listed synthetic colourings subject to certification by the FDA	Aluminium and calcium lakes of: orange B, fast green FCF, indigo carmine, tartrazine, erythrosine and brilliant blue	–	No limit specified	
Natural colours – not subject to certification	Alkannet	–	GMP (15 mg/pound or pint)	33
	Annatto	E160(b)		
	Carmine	E120		
	β-carotene	E160(a)		
	Carotenoids	E160,E161		
	β-apo-8-carotenal	E160(e)		
	Beetroot red	E162	GMP	
	Caramel	E150		
	Curcumin	E100		
	Lactoflavin	E101		
	Canthaxanthin	E161(g)	GMP (30 mg/pound or pint)	66
Tuna, Salmon } canned	Colourings not permitted		Nil	
Shrimp – breaded and frozen	Colourings not permitted		Nil	
Oysters – canned and raw	Colourings not permitted		Nil	
Casings – sausage surfaces	Orange B	–	150	
Emulsifiers and Stabilisers				
General: Non-standardised	Agar	E406	2500	
	Alginate, sodium~	E401	10×10^3	
	Alginate, ammonium~	E403	1000	
	Alginate, potassium	E402	100	
	Alginate, calcium~, propylene glycol~	E404,E405	3000	
	Carrageenan	E407	GMP	
	Carrageenan, ammonium, calcium, potassium, sodium salts of~	E407		
	Cellulose, hydroxypropyl~, methyl~, hydroxypropylmethylethyl~ methylethyl~, sodium carboxymethyl~	E463,E464,E461 E465,E466		
	Furcelleran	–		
	Furcelleran, ammonium, calcium, potassium, sodium salts of~	–		
	Gum arabic	E414	10×10^3	
	Gum tragacanth	E413	1,000	
	Gum, carob~, guar~	E410,E412	5,000	
	Gum, ghatte~	–	1,000	
	Gum, karaya~	E416	20	
	Gum, xanthan~	E415	GMP	

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Fats (edible), propylene glycol mono and di esters of~	E477		
	Fats or oils (edible), mono and diglycerides of ~, acetylated monoglycerides of ~, diacetyl tartaric esters of mono- and diglycerides of ~	E471		
	Fats or oils (edible), monosodium phosphate derivatives of ~	-		
	Fatty acids, aluminium, calcium magnesium, potassium, sodium salts of ~	E470 (except aluminium)		
	Fatty acids (edible), mono and diglycerides of~ (including glyceryl monostearate)	E471		
	Fatty acids (edible), propylene glycol mono and di esters of~	E477	GMP	
	Fatty acids, monosodium phosphate derivates of ~	-		
	Lactylated fatty acid esters of glycerol and propylene glycol	E478		
	Polyglycerol esters (up to decaglycerol) of fatty acids of: corn oil, cottonseed oil, lard, palm oil, peanut oil, safflower oil, sesame oil, soyabean oil and tallow	E475		
	Glycerin, synthetic glycerin	E422		
	Glyceryl triacetate	-		
	Lecithin, hydroxylated lecithin	E322		
	Starch, modified by specific treatments	-		
	Pectins (high and low ester~, amidated~, pectinic acid, pectinates)	E440		
	Propylene glycol	-	20×10^3	
	Sorbitol	E421(i)	120×10^3	
	Phosphate, mono, di and tribasic, calcium~, sodium~	E341,E339		
	Phosphate, mono and dibasic, ammonium~	-		
	Phosphate, dipotassium~, sodium acid~, sodium aluminium~	E340,-,541	GMP	
	Phosphate, calcium hexameta~, sodium meta~, sodium hexameta~, sodium tripoly~, sodium pyro~, sodium acid pyro~, tetrasodium pyro~	-,-,E450(c) E450(b),E450(a) E450(a)		
Shrimp - frozen, raw, breaded	Emulsifiers and stabilisers-only in batter ingredients		As given for non-standardised products	
Oysters - canned, raw	Emulsifiers and stabilisers not permitted		Nil	
Tuna - canned	Emulsifiers and stabilisers not permitted		Nil	
Preservatives				
General: Non-standardised	Benzoic acid	E210		
	Benzoate, sodium~	E211	1000	
	p-Hydroxybenzoate, methyl~, propyl~	E218,E216		
	Sorbic acid	E200		
	Sorbate, calcium~, potassium~, sodium~	E203,E202,E201		
	Propionic acid	E280	GMP	
	Sulphur dioxide (SO_2)	E220		
	Bisulphite, potassium~, sodium~	-,E222		
	Metabisulphite, potassium~, sodium~	E224,E223		

Additives - preservatives
flavours
Hazards - pesticides

Fish Product	Permitted Additive	EEC Serial Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Cod roe	Nitrate, potassium~	E252	200	
Chubb - smoked	Nitrite, sodium~	E250	100 (minimum)	
- loin muscle, smoked	Nitrite, sodium~	E250	200 (minimum)	
Salmon, Sablefish, Shad } smoked, cured	Nitrite, sodium~	E250	200	
	Nitrate, sodium~	E250	500	
Tuna - smoked, cured	Nitrite, sodium~	E250	10	
Shrimp - canned, wet pack	Bisulphite, sodium~	E222	GMP	
Flavour Enhancing Agents				
General: Flavourings and flavour enhancing agents are not permitted for use in fish products				

HAZARDOUS SUBSTANCES

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
Pesticide Residues from Environmental or Unavoidable Contamination				
Fish and shellfish	Aldrin	309-00-2	0.3 (based on fresh	
	Dieldrin	60-57-1	0.3 weight)	
	DDT 1,1 Bis(4-chlorophenyl)-2,2,2-trichloroethane	50-29-3		
	TDE (DDD) 2,2-Bis(4-chlorophenyl)-1,1-dichloroethane	72-54-8	5.0	5.0
	DDE 2,2,-Bis(4-chlorophenyl)-1,1-dichloroethylene	72-55-9	(where minimum level of individual component prior to adding is 0.2)	
	Endrin	72-20-8	0.3	
	Heptachlor (3,4,5,6,7,8,9-heptachlorodicyclopentadiene)	76-44-8	0.3	0.3
	Heptachlor epoxide	1024-57-3		

Fish Product	Hazardous Substance	CAS Number	Specified Limit Individual (mg/kg)	Specified Limit Combined (mg/kg)
	Kepone (chloredecone)	143-50-0	0.3 (except for crabmeat)	
Fish	Chlordane	57-47-9	0.3 (minimum level of individual isomers prior to inclusion in the total is 0.02)	
	Mirex	2385-85-5	0.1	
	Toxaphene (camphechlor)	800-35-2	5.0	
Crabmeat	Kepone (chloredecone)	143-50-0	0.4	
Frogs legs (edible portion)	BHC (Benzene hexachloride)	608-73-1	0.5	
Contaminants				
i) Organochlorine				
Fish and shellfish	PCBs (Polychlorinated biphenyls)		2.0	
ii) Heavy metals				
Fish, Shellfish, Other aquatic animals (edible portion only, fresh, frozen, processed)	Methyl mercury (expressed as mercury)		1.0 (subject to current review)	
iii) Other trace metals				
General:	No limits established			
Natural Toxins				
Albacore tuna, Skipjack tuna, Yellowfin tuna	Histamine		500 (hazard action level); 200 (indicates mishandling)	
Clams, Mussels, Oysters (fresh, frozen or canned)	Paralytic shellfish toxin (PSP)		5.0	

Fish Product	Hazardous Substance	Specified Limit	
		Individual (mg/kg)	Combined (mg/kg)
Radionuclides			
General	I-131 (Iodine - 131)	300 Bq/kg (8000 pci/kg)	
	CS-134 + CS-137 (Caesium - 134 + Caesium - 137)	370 Bq/kg (10000 pci/kg)	

MICROBIOLOGICAL STANDARDS

Fish Product	Microbial Group or Species	Specified Limit: Number of viable organisms per gram of product
Crab meat, fresh or frozen	Escherichia coli	Less than 3.6 per gram
Shrimps, raw, breaded	Plate count - aerobic	Less than 10^5 per gram
	Escherichia coli	Less than 3.6 per gram
	Staphylococcus aureus	Less than 100 per gram

Labelling

See Table 3b.

TABLE 3a Summary of the EEC Directive on Labelling, Presentation and Advertising of foodstuffs for sale to ultimate consumers.

GENERAL

a) This table summarises the Council Directive of 18 December 1978 on the approximation of the laws of the Member States relating to the labelling, presentation and advertising of foodstuffs for sale to the ultimate consumer. (879/112/EEC) Other Community provisions or, where there are none, national provisions applicable to certain specified foodstuffs may derogate from some provisions of this directive.

Note that a directive is the legal instrument envisaged by the EEC Treaty for approximating the laws of the Member States and binds each one to which it is addressed, in respect of the results to be achieved, but leaves the mode and means to the discretion of the national authorities. (In contrast to a Regulation which has general application and is binding in its entirety.)

b) Definitions:

Labelling - shall mean any words, particulars, trade marks, brand name, pictorial matter or symbol relating to a foodstuff and placed on any packaging, document, notice, label, ring or collar accompanying or referring to such foodstuff.

Pre-packed foodstuff - shall mean any single item for presentation as such to the ultimate consumer, consisting of a foodstuff and the packaging into which it was put before being offered for sale, whether such packaging encloses the foodstuff completely or only partially, but in any case in such a way that the contents cannot be altered without opening or changing the packaging.

Ingredient - shall mean any substance, including additives, used in the manufacture or preparation of a foodstuff and still present in the finished product, even if in altered form.

THE LABEL

Location of Mandatory Label Information

When the foodstuffs are prepackaged, the particulars subsequently referred to shall appear on the prepackaging or on a label attached thereto, notwithstanding this, Member States may authorise that all or some of the particulars be given only on the relevant trade documents.

Member States may permit that only the name under which the product is sold, the quantity, and the date of minimum durability be indicated on packaging or containers the largest surface of which has an area of less than 10 cm^2.

Visual Clarity of Labelling

The particulars shall be easy to understand and marked in a conspicuous place in such a way as to be easily visible, clearly legible and indelible. They shall not in any way be hidden, obscured or interrupted by other written or pictorial matter.

The name under which the product is sold, the net quantity, and the date of minimum durability shall appear in the same field of vision. This requirement may be extended to the list of ingredients.

Language

Member States shall ensure that the sale of foodstuffs within their own territories is prohibited if the labelling does not appear in a language easily understood by purchasers, unless other measures have been taken to ensure that the purchaser is informed. This shall not prevent such particulars from being indicated in various languages.

Honesty and Clarity

The labelling and methods used must not be such as could mislead the purchaser to a material degree, particularly (i) as to the characteristics of the foodstuff - its nature, identity, properties, composition, quantity, durability, origin or provenance, method of manufacture or production, (ii) by attributing to the foodstuff effects or properties which is does not possess, (iii) by suggesting that the foodstuff possesses special characteristics when in fact all similar foodstuffs possess such characteristics.

Subject to the provisions applicable to foodstuffs for particular nutritional uses, labels should not attribute to any foodstuff the property of preventing, treating or curing a human disease, or refer to such properties.

CONTENTS OF THE LABEL

Name of the Product (compulsory requirements)

The name under which the product is sold shall be the name laid down by whatever laws, regulations or administrative provisions apply to the foodstuff in question. In the absence of any such name, the label shall bear either the name which is customary in the Member States where the product is sold to the ultimate consumer, or a description of the foodstuff (and, if necessary, of its use) that is sufficiently precise to inform the purchaser of its true nature and to enable it to be distinguished from products with which it could be confused.

The name shall include or be accompanied by particulars as to the physical condition of the foodstuff or the specific treatment which it has undergone (eg powdered, freeze-dried, deep-frozen, concentrated, smoked) in all cases where omission of such information could create confusion in the mind of the purchaser.

No trade mark, brand name or fancy name may be substituted for the name under which the product is sold.

List of Ingredients (compulsory requirements)

The list of ingredients shall include all the ingredients of the foodstuff, in descending order of weight, as recorded at the time of their use in the manufacture of the foodstuff. It shall appear preceded by a suitable heading which includes the word 'ingredients'.

Ingredients need not be listed in the case of products consisting of a single ingredient.

Where one ingredient of the foodstuffs is in itself the product of several other ingredients, the latter shall be regarded as ingredients of the foodstuff in question; a compound ingredient may be included in the list of ingredients, under its own designation in so far as this is laid down by law or established by custom, in terms of its overall weight, provided that it is immediately followed by a list of its ingredients. Such a list, however, shall not be compulsory where the compound ingredient constitutes less than 25% of the finished product; or where the compound ingredient is a foodstuff for which a list of ingredients is not required under Community rules.

The following shall not be regarded as ingredients (i) the constituents of an ingredient which have been temporarily separated during the manufacturing process and later reintroduced but not in excess of their original proportions; (ii) additives whose presence in a given foodstuff is merely due to the fact that they were contained in one or more ingredients of that foodstuff, provided that they serve no technological function in the finished product, and additives which are used as processing aids; (iii) substances used in the quantities strictly necessary as solvents or media for additives or flavouring.

Added water and volatile products shall be listed in order of their weight in the finished product; the amount of water added as an ingredient in a foodstuff shall be calculated by deducting from the total amount of the finished product the total amount of the other ingredients used. This amount need not be taken into consideration if it does not exceed 5% by weight of the finished product; or where the water is used during the manufacturing process solely for the reconstitution of an ingredient used in concentrated or dehydrated form; or in the case of a liquid medium which is not normally consumed.

Ingredients used in concentrated or dehydrated form and reconstituted at the time of manufacture may be listed in order of weight as recorded before their concentration or dehydration.

In the case of concentrated or dehydrated foods which are intended to be reconstituted by the addition of water, the ingredients may be listed in order of proportion in the reconstituted product provided that the list of ingredients is accompanied by an expressed such as (ingredients of the readyto-use product'.

Some categories of ingredients may be designated by the name of the category rather than the specific name. These are:

Refined oils other than olive oil - may be called 'Oil', together with either the adjective 'vegetable' or 'animal', as appropriate, or an indication of their specific vegetable or animal origin. The adjective 'hydrogenated' must accompany the indication of a hydrogenated oil where the vegetable origin or the specific vegetable or animal origin is mentioned.

Refined fats - 'Fat', together with either the adjective 'vegetable' or 'animal', as appropriate, or an indication of their specific vegetable or animal origin.

Mixtures of flour obtained from two or more cereal species - 'Flour', followed by a list of the cereals from which it has been obtained in descending order by weight.

Starches, and starches modified by physical or enzymatic means - 'Starch'.

All species of fish where the fish constitutes an ingredient of another foodstuff and provided that the name and presentation of such foodstuff does not refer to a specific species of fish - 'Fish'.

All spices and spice extracts not exceeding 2% by weight of the foodstuff - 'Spice(s) or mixed spices'.

All herbs or parts of herbs not exceeding 2% by weight or the foodstuff - 'Herb(s) or mixed herbs'.

All types of crumbed baked cereal products - 'Crumbs or rusks' as appropriate.

All types of sucrose - 'Sugar'.

Anhydrous dextrose and dextrose monohydrate - 'Dextrose'.

All types of caseinates - 'Caseinates'.

Pressed, expelled or refined coca butter - 'Cocoa butter'.

Categories of ingredients must be designated by the name of the category to which they belong, followed by their specific name or EEC number - colour, preservative, antioxidant, emulsifier, thickener, gelling agent, stabiliser, flavour enhancer, acid, acidity regulator, anticaking agent, modified starches (indication of specific name or EEC number is not required), artificial sweetener, raising agent, glazing agent, flour improvers. (Note: if an ingredient belongs to more than one of the categories, the category appropriate to the principal function in the case of the foodstuff in question shall be indicated.)

Where the labelling of a foodstuff places emphasis on the presence or low content of one or more ingredients which are essential to the specific properties of the foodstuff, or where the description of the foodstuff has the same effect, the minimum or maximum percentage, as the case may be, used in the manufacture thereof shall be stated. This information shall appear either immediately next to the name under which the foodstuff is sold or in the list of ingredients in connection with the ingredient in question.

The Quantity Declaration (compulsory requirement)

Net quantities shall be expressed in units of volume in the case of liquids, or in units of mass in the case of other products, using the metric system as appropriate.

Where the indication of a certain type of quantity (eg normal quantity, minimum quantity, average quantity) is required by Community provisions or, where there are none, by national provisions, this quantity shall be regarded as the net quantity.

Community provisions or, where there are none, national provisions may, for certain specified foodstuffs classified by quantity in categories, require other indications of quantity.

Where a prepackaged item consists of two or more individual prepackaged items containing the same quantity of the same product, the net quantity shall be indicated by mentioning the net quantity contained in each individual package and the total number of such packages. Indication of these particulars shall not, however, be compulsory where the total number of individual packages can be clearly seen and easily counted from the outside and where at least one indication of the net quantity contained in each individual package can be clearly seen from the outside.

Where a prepackaged item consists or two or more individual packages which are not regarded as units of sale, the net quantity shall be given by indicating the total net quantity and the total number of individual packages.

In the case of foodstuffs normally sold by number, Member States need not require indication of the net quantity provided that the number of items can clearly be seen and easily counted from the outside or, if not, is indicated on the labelling.

Where a solid foodstuff is presented in a liquid medium, the drained net weight of the foodstuff shall also be indicated on the labelling. A 'liquid medium' is a liquid that is merely an adjunct to the essential elements of that preparation and is thus not a decisive factor for the purchase ie water, salt water, brine, vinegar, aqueous solutions of sugars, and fruit or vegetable juices in the case of tinned fruit or vegetables.

It shall not be compulsory to indicate the net quantity in the case of foodstuffs which are subject to considerable losses in their volume or mass and which are sold by number or weighed in the presence of the purchaser; or the net quantity of which is less than 5 g or 5 ml; excepting spices or herbs.

Shelf-Life Labelling

The shelf-life must be indicated by a date of minimum durability which shall be the date until which the foodstuff retains its specific properties when properly stored.

The date shall be preceded by the words 'best before ...' when the date includes an indication of the day, 'best before end ...' in other cases. However, in the case of certain foodstuffs which, from the microbiological point of view, are highly perishable, Member States may require the words 'use before ...' to be indicated.

The words referred to in the preceding paragraph shall be accompanied by either the date itself, or a reference to where the date is given on the labelling. If need be, these particulars shall be followed by a description of the storage conditions which must be observed if the product is to keep for the specified period.

The date shall consist of the day, month and year in uncoded chronological form. However, in the case of foodstuffs:

which will not keep for more than three months, an indication of the day and the month will suffice;

which will keep for more than three months but not more than 18 months, an indication of the month and year will suffice;

which will keep for more than 18 months, an indication of the year will suffice.

Other Information to be Included on the Label

Any special storage conditions or conditions of use (compulsory requirement).

The name or business name and address of manufacturer or packager, or of a seller established within the Community.

Particulars of the place of origin or provenance in the cases where failure to give such particulars might mislead the consumer to a material degree as to the true origin or provenance of the foodstuff.

Instructions for use when it would be impossible to make appropriate use of the foodstuff in the absence of such instructions.

TABLE 3b Summary of the Labelling Regulations for packaged products intended for sale in the USA

GENERAL

The law states that required label information must be conspicuously displayed in terms that the ordinary consumer is likely to read and understand under ordinary conditions of purchase and use.

THE LABEL

Location of Mandatory Label Information

Label information must be conspicuously displayed.

The principal display panel is the part of the label most likely to be displayed, presented, shown or examined under customary conditions of display. It shall be large enough to accommodate the obligatory statements. The information panel is a part of the label immediately adjacent (normally to the right) of the principal display panel. The following may appear on either the principal display panel or the information panel - name and address of the manufacturer, number of servings, list of ingredients, nutritional labelling, labelling of foods for special dietary use.

Visual Clarity of Labelling

Statements regarding characterising ingredients must be in an easily legible, bold face print or type. This must be in direct contrast to any other printed or graphic matter and must be the larger of the following requirements.

a) Not less than one half the height of the largest type used in the common or usual name label.

b) Where the principal display panel has an area of 5 square inches or less, characters must be not less than 1/10 inch in height (and quantity declarations must be in the lower 30% of the field).

Where the principal display panel has an area greater than 5 square inches, characters must be not less than 1/8 inch in height.

Ingredients must be given in characters which are not less than half the height of the largest type used for the common or usual name of the product.

Height to width ratio must not exceed 3:1.

These sizes of print or type characters must also be used for the mandatory descriptions required for the following specific products:

fish sticks or portions made from fish mince
fried clams made from minced clams
non-standardised breaded products made from comminuted shrimp

Statements which are blown, embossed or moulded onto glass or plastic must be in type sizes which are at least 1/16" larger than the minimum sizes stated above.

Note, that if the principal display panel of a food for which a common or usual name regulation is established is too small to accommodate all mandatory requirements, applications should be made to the Commissioner who may establish, by regulation, an acceptable alternative (such as a smaller type size).

Language

The full address including the English name of the country of origin, and of the manufacturer, packer or supplier must be in English.

If the label bears representations in a foreign language then all the required statements must be given in the foreign language as well as in English.

Honesty and Clarity

Labelling must not include any false or misleading statements nor omit any material facts. The shape, form or degree of filling of a package also comes within the scope of regulations forbidding misleading information.

The common or usual name shall be uniform among all identical or similar products and may not be confusing by similarity to the name of any other food not reasonably encompassed within the same name. Each class or sub-class of foods shall be given its own common or usual name that states, in clear terms, what it is and in a way that distinguishes it from other foods.

The common or usual name of the product shall include a statement of the presence or absence of any characterising ingredient and the need for the user to add any such ingredient when their presence or absence has a material bearing on price, consumer acceptance or when the labelling and appearance of the food may otherwise create an erroneous impression as to their presence or absence.

CONTENTS OF THE LABEL

Name of the Product

A common or usual name may be established by common usage or establishment of a regulation or a standard of identity.

The common or usual name, which may be a coined term, must:

appear on the principal display panel in bold type and in lines generally parallel to the base of the package as it is displayed;

accurately identify, or describe as simply and accurately as possible, the basic nature of the food or its characteristic properties or ingredients;

be uniform among all identical or similar products and each class or sub-class be given its own common or usual name.

For some products the common or usual name shall include the percentages of characterising ingredients. The form of the product (eg sliced, whole or chopped) must be included unless shown by a picture or by the product being visible through the container. Imitations of other foods must be labelled as such.

If there is a standard for the product, the complete name designated in the standard must be used. Specific non-standardised fishery products for which such regulations exist are:

Fish sticks or portions made from minced fish
Pacific whiting
Bonito
Fried clams made from minced clams
Crabmeat
Seafood cocktails
Non-standardised breaded composite shrimps units
Greenland turbot

Specific fishery products for which standards of identity exists are:

Oysters (extra large, large, medium, small, very small)
Oysters, Olympia
Oysters, Pacific (large, medium, small, extra small)
Oysters, canned
Salmon, Pacific, canned
Shrimp, canned wet pack in transparent or non-transparent containers
Shrimp, frozen raw (breaded or lightly breaded)
Tuna, canned

List of Ingredients

i) Ingredients must be listed by their common names in order of their predominance by weight unless the product is standardised.

ii) Labels on standardised products require only those ingredients which the standard makes optional.

iii) The percentage of characterising ingredients shall be declared with the words "containing (or contains) ... percent (or %) ..." or "... percent (or %) ...", immediately below the common or usual name.

iv) Food additives, including colours, emulsifiers and stabilisers are required to be listed as ingredients. Spices, flavours and colours may be listed as such, without naming the specific materials except for the following: artificial colours or flavours must be labelled as such; colours may be listed in their abbreviated form; and certain coal tar colours must be named specifically. Preservatives should be declared with the common or usual name of the ingredient and a description of its function (eg 'preservative', or 'to help protect flavour' etc). Added water must be declared in the appropriate position in the ingredients list.

Quantity Declaration

Accurate NET quantities must be declared, separated from the other information, and given in the following units: the avoirdupois pound, the US gallon and, additionally if desired, metric units of quantity. The net contents of packages of less than one pound must be declared in ounces. Packages of one pound or over but less than 4 pounds must have the net weight declared first in ounces followed by (in parenthesis) pounds and ounces or pounds and common or decimal fractions of the pound.

Similarly, volumes of liquid products of less than one pint must be declared in fluid ounces; for products of one pint or over but less than one gallon, net quantities must be given first in fluid ounces followed by (in parenthesis) quarts, pints and fluid ounces or fractions of the pint or quart.

Larger packages need not be labelled in terms of total numbers of ounces or fluid ounces.

Declarations of drained weight rather than net weight is required on products which are packed in media that is commonly discarded and not consumed as food.

Where labels indicate the number of servings contained, the size of each serving must be indicated.

Where standardised products in containers fall below the standard of fill required then the label must bear a general statement to that effect.

Shelf-Life Declaration

There are no regulations requiring an indication of shelf-life to be included on the label.

Other Information to be Included on the Label

The name and address of the manufacturer, packer or distributor must be stated. If the name on the label is not the manufacturer, the name must be qualified by an expression such as - 'manufactured for' or 'distributed by'.

There are regulations governing labelling or other representatives of foods as being of special dietary value (eg supplying a special dietary need for a physical, physiological, pathological or other condition; or supplying a vitamin supplement or to compensate for inadequacies of a single food diet).

Smoked fish in hermetically sealed containers which need to be refrigerated (eg vacuum packages) must be conspicuously labelled: "MUST BE KEPT REFRIGERATED BELOW 38°F".